ELEMENTS
OF THE
SCIENCE OF LANGUAGE

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ELEMENTS
OF THE
SCIENCE OF LANGUAGE

BY

IRACH JEHANGIR SORABJI TARAPOREWALA

B.A., PH.D., BARRISTER-AT-LAW

SOMETIME PROFESSOR OF COMPARATIVE PHILOLOGY IN THE UNIVERSITY OF CALCUTTA; PRINCIPAL, M. F. CAMA ATHORNAN INSTITUTE, ANDHERI, BOMBAY; DIRECTOR, DECCAN COLLEGE POST-GRADUATE AND RESEARCH INSTITUTE, POONA

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Dedicated
with Reverence to
my Teachers, Indian and European
and
with Affection to
my Pupils in
Benares, Calcutta, Poona and Bombay

FOREWORD

(First Edition)

वागर्थाविव संपृक्तौ वागर्थप्रतिपत्तये ।
जगतः पितरौ वन्दे पार्वतीपरमेश्वरौ ॥

It is well over a decade since I began to write this book and in fact the first three chapters have been in print quite a long while. For one reason or other the various chapters were written with long intervals in between. Hence the work might seem a bit patchy here and there and in places self-contradictory. My plan of the chapters has not varied much, but as I got more and more experience in teaching the subject, I was obliged to vary the details considerably. A discerning reader will easily perceive the difference of treatment between the first four chapters and the succeeding ones. If I had been able to finish off the whole book within six months or a year after beginning it, I think it would have been much smaller and also more full of mistakes. I do not regret that it has taken so long in writing and finishing, for I have found more time for study and teaching and learning by experience.

I have intended this book primarily for Indian students. Comparative Philology is still a vague subject to most in this country and I have heard the wildest ideas about it even from otherwise learned and well-informed people. I will be perfectly satisfied if this book arouses the interest of our students in a subject universally regarded as 'dry,' and consequently extremely uninteresting. I well remember how I myself had to struggle through books dealing with the subject but containing illustrations from modern and ancient languages of Europe—most of which were utterly beyond me at that time. I thought (and I think even now) that a great deal of the repulsion this subject evokes is due to the fact that the examples do not come home to us Indians. This I have tried to remedy and this has been my main object in writing this book.

I have had the privilege to sit at the feet of many great teachers. I only hope I am not disgracing them in the following pages. And I have had the great joy of teaching hundreds of young men and women of my country in three great centers of learning—Benares, Calcutta and Bombay. I have had the rare good fortune of being rewarded by their genuine esteem and affection. Many of them have now achieved greatness on their own account. To both these—teachers as well as pupils of mine—I owe far more than I can ever hope to repay. And to both with deep reverence and affection I offer this slight tribute.

ANDHERI; BOMBAY, IRACH J. S. TARAPOREWALA
October, 1931.

FOREWORD

(Second Edition)

Sometime before the beginning of World War II, the University of Calcutta asked me a revised second edition of this book. I thought it better to revise the whole book, to rearrange the chapters and to add more material. So the book has been thoroughly revised and enlarged and in part rewritten. The revised typescript was sent to the Calcutta University Press just a few months before World War II broke out. This great world-shaking event delayed the publication of this Second Edition. Japanese bombs were dropped over Calcutta especially near the locality where the University Press was located, and this delayed still further the printing of this Second Edition. To me, however, this was a clear advantage, for the extra time I thus got was utilised in reading up some more recent developments. This new information was incorporated at the 'proof' stage. The Calcutta University Press deserves all praise in carrying through this work in spite of unprecedented difficulties and shortage both of labour and materials.

Sri Dwijendranath Basu, Research student in Linguistics at the University of Calcutta, has prepared the Table of Contents and the various Indexes, with painstaking and loving care, for which I have to express to him my deep gratitude. It is these Indexes which add to the value of such a work meant for students.

GAMDEVI; BOMBAY,
June, 1949.

IRACH J. S. TARAPOREWALA

FOREWORD

(Third Edition)

The Second Edition (of which a limited number of copies were printed) was exhausted within a few months of its publication. The urgent call for a Third Edition proves that our students in India (and Pakistan) do need a Textbook for the Elements of Linguistics.

Not having had the time to revise the whole work, I have merely contented myself with going through the pages of the Second Edition making changes where absolutely needed and correcting many printing mistakes. Except for this, the work may be regarded as a reprint of the Second Edition.

BOMBAY, IRACH J. S. TARAPOREWALA
2nd October, 1955.

(Postscript)

The Third Edition of this Volume comes to light after the "passing on" of our dear father. The corrections entailed in the preparation of this edition were completed midst great physical and mental stress owing to his departure for Iran to take up his appointment as Professor of Sanskrit and Indology at the Teheran University. His love for the pursuit of knowledge was only equalled by his great zest to serve the student world that he loved so well. And so, despite his advanced age, he accepted this post in a distant land. But the Lord deemed it otherwise, and he had to return in failing health but with his spirits undimmed till the end.

Yet it is certain that the ideals he set before himself, "To love, to know and to serve", will continue to inspire his students for the advancement of scholarship. It is with this hope that this edition is offered to the students of philology and linguistics.

We are also thankful to the authorities of the Calcutta University, for their kindness in undertaking to bring out the Third Edition of our father's major work.

BOMBAY,
15th April, 1956.

SAROSH IRACH TARAPOREWALA
JEHANGIR IRACH TARAPOREWALA
BARZO IRACH TARAPOREWALA

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CHAPTER I

INTRODUCTION: THE PSYCHOLOGY OF SPEECH: BRANCHES OF LINGUISTIC STUDIES.

§ 1. *Linguistics is a subject of general interest.*

It has frequently been assumed that Linguistics (or "Philology" as it used to be called) is a subject of no interest whatever to the average student and that only a few specially gifted pesrons are capable of mastering or of even understanding the subject. There is some element of truth in this assumption, but the fault lies with the books[1] that deal with the subject and not with the subject itself. If we open a book on Linguistics at random the chances are that we would be confronted with strange words in all sorts of languages, living, dead and hypothetical, and weird sounding technical words and wonderful seeming equations which purport to say that such and such a word in one language is the same as such and such a word in another language.[2] Of course in every science in modern days there are lots of technical, and necessarily dry, details to be found, but that need not concern anybody except the expert. But the Science of

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[1] Of course I must admit glorious exceptions, such as, among older writers, Max Müller, Whitney and Sayce, and among the more recent ones Meillet, Jespersen, Vendryes, Weekley, Bloomfield, Goldberg and others.

[2] E.g. चक्र = wheel = cycle; or गर्भ = calf; and many others. See also § 127 below.

Language should be of interest to every human being, because it concerns the pre-eminently human faculty—the faculty of conveying ideas from one mind to another by means of articulate sound.

§ 2. *Speech* (lógos) *distinguishes man from animals.*

The Greeks had a very fine word to describe human speech. It was the word *lógos*. The word also meant that other faculty which distinguishes man [1] from other animals, viz., the power of thought. The power of speech is impossible without the power of thought and hence the Greeks used the term, *áloga* for animals—implying that they were without either kind of *lógos*. Of course we know that animals can communicate to each other their various feelings like hunger, fear, sexual desire and so on, and this they do by means of the definite sounds they produce. But we cannot give the name *language* to these sounds, because of the one essential characteristic these lack; the power, that is, of thought, which lies at the back of human speech, however primitive it might be. It seems very likely that the human race, too, was in some long distant past speechless like the animals, but that must have been when the thought-centres were not developed enough in the physical brain.[2] We are not concerned with the details of the question here, suffice it to say that the human being in that stage of evolution was not able to express any but the most elementary feelings appertaining to his physical body. With the gradual expansion of mental powers came the dawning of speech to the human race; and it seems probable that the sexual instinct did play a considerable part in bringing about this development.[1]

---

[1] The word *man* is from the √ *man* (=मन्), to think.

[2] And probably this being was physically very different from the genus *Homo Sapiens*.

§ 3. *Many forces combined produce human speech.*

In whatever way human speech has developed our business is to investigate its varied richness and its history *subsequent* to its coming into being and establishing itself as the special distinctive mark of humanity. Scholars nowadays hardly trouble themselves about ultimate questions, for it is possible to advance many different theories as to these, each one of which may be supported by scores of examples. The probability is that each theory is only partially true and that many and various forces have co-operated to give birth to human speech.

§ 4. *Thought and Language, the two characteristics which differentiate man from animals.*

But before we begin to examine these in some detail, we should first try to understand wherein lies the special characteristic of the human race. The animal is not incapable of thought of a certain rudimentary type, and some individuals among the animals are capable of fairly complex trains of thought.[2] But, *taken as a whole,* we are justified in maintaining that beyond the most elementary processes animals are incapable of thinking. Animals, for example, can express the feelings of hunger, pain, anger, sexual desire and such other elementary needs of their lives, but not a connected chain of ideas.[1] And the most primitive ancestor of the human being was not very much different.[2] But we may be safe in asserting that ever since *Homo Sapiens* has appeared on earth, language has formed a very essential part of his equipment, and that it is the high mental development implied by language that has placed him at the head of all evolution.

---

[1] It is a fact that animals are most "vocal" during the breeding season. It is not for nothing that our Indian psychologists have called this sexual instinct the **आदिरस** (the first instinct). See an essay on the *Origin of Language* by Mr. Sasadhar Ray, M.A., B.L., in Sir Asutosh Mookerjee Silver Jubilee Volumes (Vol. I, pp. 77 ff.).

[2] Like the horses of Elberfeld who could work sums in arithmetic or the educated dog of Mannheim (see *Revuo Psiche*, Sep. and Dec., 1913). Monkeys, like the famous Consul and Boo-Boo, are also examples.

§ 5. *Thought and Language must go together.*

By "language" in this connection we imply any means, whether vocal or otherwise, by which one human being may communicate his ideas to another. This is a swift and powerful means of progress, for by it many minds can co-operate as if they formed a single unit.[3] A human being thinks and, as a necessary corollary of his thinking, he wishes to communicate his ideas. In the beginning he may have done so by movements of his limbs, but articulate speech must have followed almost immediately. "Man's prerogative is to dominate his world by the aid of intelligence of a high order. When he defied the ice-age by the use of fire, when he out-faced and outlived the mammoth and the cave-bear, he was already the rational animal, *Homo Sapiens*. In his way he thought even in those far-off days. And therefore, we may assume, until direct evidence is forthcoming to the contrary, that he likewise had language of an articulate kind. He tried to make a speech, we may almost say, as soon as he had learned to stand up on his hind legs".[1] As soon as, therefore, man begins to think, i.e., to have concepts, he must have language. The question of the close relation of thought and language need not detain us here. Suffice it to say that except in the most rudimentary forms (and perhaps also in the highest regions of transcendental metaphysics) thought and language are practically two aspects of the same fundamental principle. "If language is ultimately a creation of the intellect, yet hardly less fundamentally is the intellect a creation of language".[2]

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[1] It has been found that when an animal has learnt a complicated trick, it does so not by a process of reasoning (*i.e.*, of connecting cause and effect) but merely by a mechanical repetition of certain movements in a certain order.

[2] No such primitive man has been known as existing in the world at present. Such primitive humanity must have long since vanished. Our conclusions regarding their linguistic capacity are solely derived from the shape and size of the most ancient skulls which bear affinity to human skulls.

[3] Animals also can act "as *one*", especially those of the gregarious type, but they do so by instinct; and it takes long generations and a fierce struggle for existence before a particular instinct can be established as a part of the equipment of a special type.

§ 6. *The three stages of "Language": (i) Gesture, (ii) Articulate speech, (iii) Written speech.*

The human being cannot live by himself. He must form social groups. In doing so he must also contrive to make his wants understood by his fellowmen. This he can do in three distinct ways: (1) when at a distance he may make use of gestures; (2) when in closer proximity he may use articulate speech in addition to, or entirely supplanting, these gestures; and (3) he may inscribe certain signs on suitable material or otherwise embody his idea in some other conventional material form.[3] The last method implies a higher development than the former two, for by its means the human being is enabled to overcome both time and space. Linguistic Science, in the sense in which it is generally understood, concerns itself mainly with the second stage, viz., spoken language.

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[1] R. R. Marett, *Anthropology*, pp. 131 f.

[2] Ibid., p. 130.

[3] Such as by the use of knotted strings, notched sticks or similar other methods.

§ 7. *Percepts and Concepts. Speech begins with Concepts.*

Man is continually receiving impressions through his five senses from his environment and his mind proceeds to analyse these separate impressions or *percepts* and tries to find out common factors from among a multiplicity of impressions. For this purpose he proceeds to arrange these impressions in " bundles " as it were, and proceeds to label the common factor in each "bundle" for future use. This common factor thus arrived at for each "bundle" is called a *concept*.[1] Now unless these are properly named and thus differentiated from each other, they could be of no use whatever. Here it is that language, or " the power of naming ", must come in. Let us take a concrete instance and see how an infant learns to speak. Among the earliest concepts of the infant is the one which he draws from among his pleasantest sense-impressions. He is fondled, nursed, cleansed, kissed, petted and, in general, has every bodily comfort seen to by those around him. Each such act done to him creates a separate impression: but very early the infant sees one person predominantly connected with these, especially with the most pressing need of his little body—food. This is the first concept he has formed. He expresses it at first by gestures of delight or by inarticulate sounds of joy, but as soon as he can articulate he discovers that those around him attach the " label " *mā* to that concept. The same process is repeated incessantly throughout our life and as we gather new impressions, we make fresh "bundles"[1] or re-arrange our old "bundles" and label the new arrangements thus made with fresh labels, ringing endless changes upon the store of sense impressions we possess. This faculty of analysing the infinite number of perceptions and arranging them variously into separate "bundles" is beyond the power of any animal whatever.[2] It is only the Divine Spark of the Mind that enables man to think and to make this analysis. It is because of this faculty that he is called MAN (the Thinker).

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[1] Cf. Locke, *Essay on Human Understanding*, III, 3. 20.

§ 8. *Concepts must be put together.*

The re-arrangement of percepts into bundles, or concepts, gives rise to distinguishing labels, i.e., mere names, which by themselves are not enough. Merely uttering the name of a concept by itself conveys no idea to the hearer, unless and until it is joined on to some other concept which has been similarly derived. That is to say, after the analysis which gives us our concepts we must have a synthesis (i.e., a putting together of several concepts) in order to be able to convey our ideas to another. The other concept need not necessarily be expressed in words, it may be merely implied by the "context of circumstances".[3] Thus if we say, "X is reading", we have this double process of analysis and synthesis. We have first of all arrived at the concept "X": we perceive a particular person in various states—eating, running, sleeping, talking, etc., and we label the common factor of all these "X". We, in the second place, draw another concept by seeing A, B, C, D and many others doing the same action and we label that "reading". And only by combining these two concepts together, we can convey our ideas to another mind.

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[1] Exactly the same fact is enunciated by Śaṅkara in his *Vedānta-sūtra-bhāṣya* (1-3-28) where he says, आकृतिभिश्च शब्दानां संबंधो न व्यक्तिभिः व्यक्तीनामानन्त्यात्संबंधग्रहणानुपपत्तेः। "The relation of a word is with genera (i.e., concepts), not with individuals (i.e., percepts); for as individuals are endless it would be impossible to lay hold of the relations".

[2] Unless, of course, we believe in human souls (and hence, necessarily, human minds) occupying animal bodies.

[3] E.g., when I look at my servant and say, "Chair", he would bring me one.

§ 9. *The Sentence is the Unit of Language.*

Such, in essence, is the nature of language. The use of language, therefore, implies this double process of analysis and synthesis. Mere analysis is not enough. And this brings us directly to the fundamental principle in dealing with languages, that *the Sentence is the unit of language.* For it is obvious that mere sound do not make language, nor, as we have just seen, the "names" by themselves unless they are put in connection (express or implied) with other "names". Hence it follows that in dealing with the various types of languages and with their mutual relations the main point to consider is. how different communities and races manipulate this art of synthesis.[1] Of course the power of analysis and the subtlety of the resulting re-arrangements of the "bundles" marks the growth from savage to civilised idiom, and the synthesis is more or less in direct proportion to the power of analysis. The question of the interrelation of languages if treated from this point of view would become one of the utmost human interest. Unfortunately few books of linguistics deal with this subject, hence our subject has got the reputation of consisting merely of "dry bones" and being "very dull".

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[1] See below Chapter II, where this point is touched upon to some extent, and Chapter IV, where an attempt has been made to go into some detail.

§ 10. *The theory of Roots.*

The next question we have to consider is, why have the concepts been named by the various races in such and such particular way, whether there lies any rule or set of rules, at the back of these " names ". This investigation has brought out a very interesting conclusion. We have said before that the various " bundles " are re-arranged in different ways, and so it naturally follows that many of these " bundles " are discovered to be closely related. Besides, in most languages the words used in a sentence are not in their crude forms but variously modified. Proceeding in this way Pāṇini discovered in India more than 2000 years ago that language is ultimately made up of what he called धातु or *roots.*[1] These roots are the ultimate foundation upon which the whole superstructure of a language is erected. Perhaps it were truer to vary the metaphor and to say that the roots are the atoms of which language is composed; for, just as it is not possible that matter could exist upon earth purely in the atomic state, so also it is not possible that a language (especially an inflected one like Sanskrit) could exist in the state of roots merely.[2] The same is found to be the case with a language like English. We know, for instance, that there are about 250000 words in English, which may all be traced to a few roots.[3] One root therefore would give rise to a very large number of words. Take for instance the I.E. √ **bher.*[4] In the Germanic it takes the form *ber-an* and through this we get the English words, to bear, burden, bier, barrow, barley (bœr-lic), beer, barn, bairn, birth and others. In Latin the same root assumes the form *fer-o*, and through this we get another series of English words, far (=barley), farina (=barley flour), fertile, reference, deference, conference, difference, inference and a host of others. In fact these ultimate roots are at the basis of most languages. They have three principal characteristics, as noted by Max Müller:[1] 1. They contain certain definite sounds which may be modified in accordance with fixed rules for each language; 2. They nearly all express definite *acts* which human beings can perform; and 3. They all express *concepts*, never percepts.

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[1] धातोः । Pan., III. I. 91.

[2] We must be always very careful not to carry our comparisons too far.

[3] Pāṇini formulated about 800 roots for Sanskrit. English has about 460 " Aryans roots".

[4] Skt. भृ (भर्), to bear, to carry.

§ *11. Various theories about the origin of language*:

(*i*) *Languages are created ready-made by God.*

In the early days of "Philology" the minds of scholars were much exercised about the origin of human speech. Various were the theories advanced to explain the reason why a particular sound was chosen to express a particular concept.[2] The ancient peoples all ascribed their speech to the Gods. We call Sanskrit the दैवभाषा, and in Europe too the legend of the Tower of Babel ascribed the origin and diversity of all languages to the direct interference of God. In one sense this is a correct view to hold, for language is the direct result of God's greatest gift to mankind—the mind.

(*ii*) *Languages are the result of evolution.*

But this view does not clearly answer our original question as to why one particular combination of sounds came to represent one particular concept. Modern philologists, quite rightly, refuse to believe that God poured down ready-made languages into the brains of human beings. Like everything else in the universe, languages are also the product of a fairly complex, though perfectly ordered, evolution. From simple types they have become more and more complex in exact proportion as the race evolved from its primitive simplicity into the complexity of civilised life. And the origin of language (i.e., of articulate speech) has now been accepted as due to psychological processes going on within the human brain.

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[1] *Three Lectures on the Science of Language*, p. 28.

[2] This must be qualified to apply mainly to the Indo-European Family.

§ 12. *The origin of language is in the revival of the motor element accompanying a perception.*

Perceptions are generally accompanied by physical movements.[1] There are desires and other emotions excited in the human being as a result of every perception and in order to satisfy these there are movements of the body. For example, a man sees a tiger and his first impulse is to run away, which he generally does. Or a man sees a stream of water and he walks up to it to quench his thirst. Moreover, besides these movements which follow upon the act of perception, there are various little (often imperceptible) movements which *accompany* the very act of perception; such, e.g., the act of touching or smelling an object, or straining the ear to listen to a sound. Thus every act of perception has an accompanying *motor element*; and when that perception is recollected, this motor element in it is also revived. For example, in recalling a piece of music, we tend to repeat the attitude of listening. In the case of sound, if we could articulate it, we make use of our vocal organs mentally. We can as perfectly control this revived motor element, especially if it is concerned with the vocal organs, as we do while actually speaking. So we can also control more or less perfectly the recollection of any other kind of motor element (e.g., a gesture) which accompanied the original perception. And the psychological origin of language lies in this revival of the motor element which accompanied the original perception. Because language is the only way in which concepts (or ideally represented objects) can be fixed and since the motor constituents of mental images have the means of controlling this ideal representation, language must have its source in these motor elements. And the first sign of language is when the motor aspect tends to issue forth as actual movement of the vocal organs. Dr. Bain says[1]: "if there be much excitement attending the recollection, we can with great difficulty prevent ourselves from getting up to repeat them (the movements)...A child cannot describe anything that it was engaged in without acting it out to the full length[2]...When we recall the impression of a word or a sentence, if we do not speak it out, we feel the twitter of the organs just about to come to that point". In short as he says further on, "thinking is restrained speaking or acting".[3] In some cases the excitation of the motor centres accompanying the recollection is so great that it bursts out in involuntary movement. Among children, among excitable people and among certain types of primitive peoples the bodily movements make up a considerable proportion of "speech". The gesture language of North America is a highly developed institution and has been fairly extensively used for intercourse between tribes who do not understand each other's language. These gestures are most natural but sometimes they are conventionalised and even abbreviated.[4]

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[1] Stout, *Manual of Psychology*, Book IV, Chap. 5.

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[1] *The Senses and Intellect*, p. 357.

[2] So also very emotional people.

[3] Op. cit., p. 358.

[4] For instance an American Indian in order to express "an old man" bent his right arm at the elbow, first clenched with the fingers

§ 13. *Theories explaining the connection of sound and sense.*

This gesture language[1] is very soon replaced by spoken language and attempts have been made to connect the sound and the concept in some manner. Various theories have been advanced to explain this connection, Max Müller has described in his picturesque style four of these theories. He calls them the *Bow-wow* theory, the *Pooh-pooh* theory, the *Ding-dong* theory and the *Yo-he-ho* theory.

(i) *The Bow-wow theory.*

The *Bow-wow* theory (or, to use the learned name, the *onomatopœtic* theory) supposes that objects are named after the sounds they produce. Thus *cuckoo* in English, or *miaou* in Chinese, are clearly the sounds produced by the animals. We know children always name animals by the noise they make.[2] But this can explain only a small portion of the vocabulary of a language. This theory, says Max Müller, " goes very smoothly so long as it deals with cackling hens and quacking ducks, but round that poultry yard there is a dead wall and we soon find that it is behind that wall that language really begins ".

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and thumb sidewise. That is the position of the arm of an old man holding a stick. When not understood, the " speaker " bent his back and tottered a few steps, thus completing the full gesture. (*Annual Report of the Bureau of Ethnology of the Smithsonian Institute*, Vol. I, p. 276, quoted by Stout, loc. cit.).

[1] When the distance is too great for the human voice to reach, other devices are used; for instance flashes of light (as in the heliograph) or flags, or the famous *drum-language* (a very complex affair) used by certain African tribes.

[2] I knew a Bengali boy who used to call an old friend of his father আপনি because the old gentleman always greeted the little chap with the words "আপনি ভাল ?"

(*ii*) *The Pooh-pooh theory.*

Next we get the *Pooh-pooh* (or *Interjectional*) theory[1], which takes its stand on the psychological fact that different perceptions excite different feelings and emotions in the human being, and there is an appropriate sound to express each human feeling. Thus the words *fie*, and probably *fiend* (according to some) are expressive of horror. But this explains even fewer words than the first named theory and we are here on very slippery ground. For one thing, the sounds accompanying different emotions are not the same for all nations. Thus, when the Englishman, being used to repressing his emotions, has a very limited set of interjections to rely upon, other nations seem to have an excess of them. And in the second place it is always possible to let the imagination run riot in the search of ultimate solution.[2] The theory sounds, however, very plausible and has doubtless some truth in it.

(*iii*) *The Ding-dong theory.*

The next one is the *Ding-dong* or *Pathogenic* theory. It also gives satisfactory explanation of a certain number of words. According to this theory " specific kinds of objects so affected the primitive man as to elicit from him, or to make use of Max Müller's metaphor, to *ring out* of him, correspondingly specific utterances ".[3] The word *zig-zag* in English, also the modern *jazz*, the word *dazzle* (probably), and such others may be cited as examples. The Hindi word जगमग and a large number of the Bengali ध्वन्यात्मक words may come under this head.[1] Reduplications for the sake of emphasis, as in " a big big man ", come under this head.[2]

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[1] Also called the *Tut-tut* theory.

[2] Thus in a book (*The Philosophy of Speech* by George Willis) attempts were made to connect *God* and *good* with the sound *goo-goo* which a cheerful and healthy infant utters, and to show that the *m*-sound in *mute* and *mystery* and *myopia* indicates silence! People have also tried to explain the *pr*-combination in Skt. प्रिय, and the connected *fr* in *friend*, by the primitive man's *purr* of delight when his beloved was beside him!

[3] Stout, loc. cit.

(iv) *The Yo-he-ho theory.*

It has been observed that roots express acts which can be performed by human beings. We find that it is the habit with labourers, while doing a heavy bit of work, to utter loud sounds in unison. This undoubtedly lightens the mental fatigue accompanying bodily labour. All sailors, for example, when hauling in the anchor shout together " yo-he-ho ", and this has been cited to explain the first syllable in *heave*. This is the *Yo-he-ho* theory, which says that the action itself is indicated by the sounds that acompany the action.

It will be seen that no single one of these theories would explain all the facts of language. Perhaps not all of them put together would explain clearly the whole of the roots of any language. Surely there should be as many different explanations as there are mental processes which accompany articulate speech.

§ 14. *Comparative and Historical methods.*

With all these theories regarding the origin of words or roots we do not concern ourselves much in modern days. These questions are largely speculative and there are not enough facts discovered yet to warrant the formulation of any definite theory. Modern students are concerned more or less with existing languages and the present tendency is mainly the collecting of a large number of facts with regard to each language. Most modern linguistic treatises fall into two chief types—*comparative* and *historical*. The former type deals with kindred groups of languages (all of them being nearly at the same stage of growth and development) with a view to finding out similarities in sentence structure, in word-building, in sounds and so forth. The latter, or the historical type, traces out the growth and development of a single language through all its stages from the time of its earliest records. A certain amount of hypothetical work has to be introduced into these studies (e.g., the original forms of I.-E. words), but every step is now guided by accurately defined laws based on precise observation. So there is no truth now in the old gibe levelled at the philologists of early days that with them " consonants were of little worth and vowels of no value at all ".

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[1] See Tagore's शब्दतत्त्व and Ramendrasundara Trivedi's शब्दकथा.

[2] So also in our Indian dialects गानतान, कापड़ांचपड़ा, etc. Among the Brazilian Botocudos *auatou* is " a stream", but *auatou-ou-ou-ou* is " the sea " (Stout, loc. cit.).

§ 15. *Special branches of Linguistics.*

These are the days of specialisation, and hence there are special branches of linguistics, which though closely inter-related are yet sufficiently clearly marked out from one another.

(i) *Syntax.*

In the first place there is the branch dealing with *Syntax*. As mentioned above the sentence is the unit of language: sentence construction is, in fact, the most essential factor of a language, and hence it should naturally be the most important branch of our study. But it is a psychological fact that very rarely indeed can a man master more languages than one equally well. Comparative Syntax, by its very name, presupposes a thorough knowledge of at least *two* languages. Hence it is not at all surprising to find that this branch of linguistics is yet only in its infancy. Even Historical Syntax presents a great deal of difficulty unless one thoroughly understands the psychology of the old races who used the language in the past.

(*ii*) *Morphology.*

The second important branch is that which treats of word-building or *Morphology*. This is closely connected with Syntax at many points. But it is on the whole easier to study and has been fairly thoroughly investigated.

(*iii*) *Phonology.*

The third branch is *Phonology*, which deals with sounds and their changes either from dialect to dialect or from one period of a language to another. In connection with this we have also to study *phonetics*, which deals with the structure of the vocal organs and the whole science of sound-production and the rules of sound change. One very important item in this branch is the discussion of the accent and its effect upon sound changes.

(*iv*) *Semantics*: (*v*) *Urgeschichte or Linguistic Palæontology.*

The three branches mentioned above constitute "formal" linguistic. We have two more branches, if possible more interesting, because they touch more the *human* aspect of the subject. These are *Semantics* and *Urgeschichte*. The former is the science of meaning. This is also in its infancy, for here too, a deep knowledge of the language is needed. It is in some respects the most fascinating of all the branches of linguistics. Urgeschichte[1] deals with the light which language throws upon the past history of the people, especially upon the prehistoric antiquities of a race. This is also a very fascinating study and here linguistics come into intimate touch with other sciences, notably with anthropology.

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[1] The word means literally "primitive history".

§ *16. Specializing is the main feature of modern Linguistics.*

All these are now studied as separate branches and there are recognised specialists in each of these. Not only this, but each family of languages has its own specialist workers and in important families like the Indo-European, even each branch has its special students and its own special magazines and literature.

CHAPTER II

LANGUAGE TYPES AND THE CLASSIFICATION OF LANGUAGES.[1]

§ 17. *Classification of languages is twofold.*

When we look at the multiplicity of languages in the world we naturally desire to arrange them in some kind of classified and systematic manner. But like everything else in nature no sharp lines of division can be found separating languages into various types. Languages merge insensibly into one another; and though two adjacent languages may be quite distinguishable, still there is always a debatable area at the boundary line where the language partakes of the characters of both. In short, "luminous differentiations however desirable from an ideal point of view, can hardly be made in all cases without outraging scientific truth ".[2] and a perfect classification, in this imperfect world, can exist only on paper without any warrant of facts. Such classifications as can be made, however, may be of various types according to the principle of division we adopt. We find that scholars have mainly used a twofold system which may be called (i) *Syntactical* and (ii) *Genealogical.*

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[1] I have made use of Chapters IV—VI of Tucker's *Introduction to the Natural History of Language* all through this chapter and consequently I have not indicated every reference in the footnotes. Of course I have had to differ occasionally from his opinions as students of his book will clearly see.

[2] Tucker, op. cit., p. 74.

(i) *Syntactical* (*or Morphological*) *classification.*

The sentence is the unit of language, and the most marked difference which can exist among languages is that of sentence construction and the various devices each has evolved to show the mutual relations of words in a sentence. Hence *syntactical*[1] differences would give a really good criterion for distinguishing language types. And on the whole it is the most reliable method of classification.

(ii) *Genealogical* (*or Historical*) *classification.*

Then again we notice that languages are related to each other both in the *material* they possess (words, etc.), as well as in the *method* by which they express themselves (syntax). The obvious conclusion seems to be that the languages of one group are all traceable to " a common ancestor",[2] and that each has varied according to the environment in which it found itself. Thus the obvious similarity of what are known as the Aryan languages of India points to such a common ancestry. Similarly English, German, Dutch and Danish are traceable to another such common ancestor and so also French, Italian and Spanish to a third common ancestor. Going one step further back, we can trace each of these three ancestors to a type which was in its turn the ancestor of all the three. This process is clearly expressed by the name *genealogical.*[1] Some philologists have entirely discarded this method of classification as not being clear enough, but for historical grammar its usefulness is obvious. It must be noted that beyond a certain point we cannot, in the present stage of our knowledge, trace the next remote common ancestor, and so at last we reach a final *hypothetical type*. Thus taking our Indian vernaculars we trace them to a common ancestor which we may call *Old Indo-Aryan*[2] and comparing it with the other two common ancestors mentioned above, *Germanic* and *Latin*, we arrive at the next stage—the *Indo-European Ursprache.*[3] But beyond that we cannot go at present, because the hypothetical restoration of this Ursprache shows such a characteristically special type that it shows no traces of a common ancestry with another type arrived at similarly from other languages. We may only speculate as to how such a type arose but we cannot find any historical or documentary proof of the matter. The most satisfactory method, and the most practical as well, is to have the syntactical classification for the various types and then to follow out the branches more or less genealogically.[4]

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[1] I purposely use the epithet *syntactical* to emphasise the fact that it is the *sentence* which is the foundation of a language. The older name *morphological* lays more stress upon the *forms* through which syntactical differences are expressed.

[2] It would be a mistake to assume that this " ancestor " could be *one homogeneous* dialect. It would be much more accurate to state that the members of a group are descendants of a nearly similar group in the past, but that the differences between the members comprising it then were much smaller than they are now. In other words, we may say that what form a related group of *languages* now were at one period a much more closely united group of *dialects.*

§ 18. *Race and Language.*

A word may be said here about the racial classification of languages once very much in favour with philologists.

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[1] A word of warning is needed here against carrying too far the analogy of the family tree.

[2] Called in German *Alt-indisch.*

[3] *Ursprache* means the "original language" or what may be termed the "parent tongue".

[4] A certain amount of syntactical classification runs through genealogical classification also.

It was based upon a misconception of the fundamental principles of anthropology. To this early misconception is due the very confusing system of nomenclature adopted in some of our books. The same names are applied alike to languages and races, leading naturally to the idea that race and language are identical. There could be no greater mistake. Language is certainly the strongest bond of union among people, and peoples of various races brought together by social or political organisations tend, in the course of time, to develop a common national speech. But it is not at all necessary that the racial type should become homogeneous as well.[1] The United States of America is peopled by practically every race of the globe but it has one uniform language. No race has got a special type of language which it can claim as of right. "Community of language necessarily implies close and continued social relations at some period or other. It need not imply more ".[2]

§ 19. *Divisions of languages.*[3]

Coming back to the syntactical classification of languages we notice in the first place a twofold division of languages possible. This is the division into *Inorganic* and *Organic*.

(*A*) *Inorganic, Positional or Isolating languages.*

In the former class we have the sentence expressed solely by position of the words *without any internal or external modification in the word itself*. Such type is also called Isolating or Positional. The best example of such a languages is Chinese.[1] Here a word is " a noun ", " a verb ", " an adverb ", or " an·adjective " according to the position it occupies in the sentence. Such languages have no formal grammar.

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[1] At any rate it does not do so over appreciably long periods.

[2] Tucker, op. cit., p. 237.

[3] See Table I at the end of this chapter (p. 38).

(B) *Organic languages.*

Organic languages are those in which the syntactical relations are indicated by ***internal modifications in the word itself or by external prefixes or suffixes added to the word.*** To this group belong the largest majority of the languages of the world.[2]

§ 20. *Subdivisions of the Organic type.*

Organic languages may be further subdivided into various types according to the various syntactical devices used. The first subdivision would be into: (I) Incorporating, (II) Agglutinating and (III) Inflecting.[3]

§ 21. *(I) Incorporating, Polysynthetic or Holophrastic languages.*

(i) Completely incorporating languages.

In an incorporating language we get "an interweaving or amalgamation of merely the most significant sounds of those different sense elements which would in most other languages stand as separate words ".[4] An example would make this clear. In Greenlandish we get the example

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[1] For details of the characteristics of this type see Chap. XIII (§§ 252-253).

[2] Of course the division line between even these two great groups is not so sharp as we may be led to expect by these definitions.

[3] I prefer that the word " inflecting " should be used in a restricted sense as here. Tucker uses the name " inflected " to indicate all three divisions of organic languages mentioned above.

[4] Tucker, op. cit., p. 78.

aulisariartorasuarpok, " he hastens to go fishing ". This "sentence-word" is made up of the parts **aulisar** (to fish), *pe***artor** (to be engaged in) and *pinne***suarpok** (he hastens). Thus we see that the main characteristics of the incorporating languages are, (*a*) the " sentence-word "[1] and (*b*) the dropping of one or more syllables of each component when incorporated. It often happens that the individual components have merely got a hypothetical existence, and are never actually used alone as individual words in the language,[2] except in some of the more advanced types. Languages of this type are mainly confined to the two Americas. The name *holophrastic* is also given to this type because the whole situation is expressed literally in one word.

(*ii*) *Partially incorporating languages.*

The typical polysynthetic language incorporates everything (the subject, the verb, the object and all the adjuncts) into one word. But there are some languages that have developed independent words and have the sentence-construction according to other methods, but, at the same time, they also incorporate, though in certain cases only, namely, mainly the pronominal elements. Thus in Basque[3] we have the pronoun incorporation both for the subject as well as the object. In that language " the verb proper has no existence apart from its pronominal complements ".[4] Thus we have *da***kar***kiot* (I carry it to him), *na***kar***su* (thou carriest me), *ha***kart** (I carry thee), etc. Hence the Basque verb is a complex thing to conjugate in all its varied forms. Partial incorporation is used as a special device in other languages which are more or less purely agglutinating or inflectional.[1] Thus in the Ba-ntu family we have the pronominal *object* incorporated with the verb as a regular feature: **sim***tanda* (we love it) but *si***ba***tanda* (we love them). In the fully developed inflected languages, especially in the synthetic stage, we often get what may be called "incorporated phrases". Thus in "vulgar" English *ain't* (is not), or the Gujarati phrase **मकुंजे** (=**मे कह्युं जे**, I said that...),[2] or the Bengali **तानहले** (=**ताहा ना हले**, that not being so). Such phrases have a greater chance of developing in those dialects which show what is called a "sentence-accent". Among the European languages *colloquial* French[3] shows this sort of incorporation fairly clearly. Thus the phrase *n'est-ce pas* (is it not?) is often abbreviated to mere *'spas*, and is a typical example from French of "an incorporated phrase".[4]

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[1] We might as well call it the " word-sentence ".

[2] This has an important bearing on the structure of the language and the development of syntax, see below Chap. III.

[3] In other respects Basque is agglutinating (§ 263).

[4] Tucker, op. cit., 79.

§ 22. (*II*) *Agglutinating languages.*

The agglutinating type is the most widely spread through the world, and embraces every variety from the almost pure agglutinating to that practically indistinguishable from the inflected type of languages. The principle of agglutination implies that the elements of the word are *glued on*, or joined on, one after the other. But there are two important points wherein typical agglutination differs from incorporation. In the first place, each element is felt to be a separate word and is capable of being used as such, and secondly, all the elements of a sentence are not joined on to make a single " sentence-word ". The first point is the characteristic feature of agglutination, from which the name itself is derived. This principle gives a great deal of flexibility and power to a language. It is seen extremely well in Turkish. Max Müller has the following glowing description of that language:[1] "It is a real pleasure to read a Turkish grammar. ... The ingenious manner in which the numerous grammatical forms are brought out, the regularity which pervades the system of declension and conjugation, the transparency and intelligibility of the whole structure, must strike all who have a sense for that wonderful power of the human mind which is displayed in language. ... In most languages (of other types) nothing of this early process remains visible. They stand before us like solid rocks, and the microscope of the philologist alone can reveal the remains of organic life with which they are built up. In the grammar of the Turkic languages, on the contrary, we have before us a language of perfectly transparent structure, and a grammar the inner workings of which we can study, as if watching the building of cells in a crystal beehive. An eminent orientalist remarked, 'we might imagine Turkish to be the result of the deliberations of some eminent society of learned men'. But no such society would have devised what the mind of man produced, left to itself in the steppes of Tartary, and guided only by its innate laws, or by an instinctive power as wonderful as any within the realm of nature ". An example will make clear that this is by no means an exaggeration, and that the principle of agglutination gives a wonderful flexibility and regularity to a language without unnecessarily overburdening the grammar. Thus, take the infinitive form *sev-mek* (to love), the negative is *sev-me-mek* (not to love). The addition of *in* gives us the reflexive form, *sev-in-mek* means "to rejoice" (lit. to love oneself), and *il* makes the passive, *sev-il-mek* (to be loved). Then again *ish* makes it reciprocal, *sev-ish-mek* (to love one another), *dir* gives it the causal sense, *sev-dir-mek* (to cause one to love). But we can go further beyond these simple forms, we can pile up the formative elements and can thus express every shade of meaning we can think of. Thus, *sev-dir-il-mek* (to be brought to love), *sev-in-dir-il-mek* (to be made to rejoice), *sev-ish-dir-il-mek* (to be brought to love one another), *sev-ish-dir-il-me-mek* (not to be brought to love one another), and so on.[1] This regularity extends all over the grammar, to the nominal declension, to the pronouns and to all the other parts of speech. In the typical agglutinating language each individual element should be felt to be a separate word and should (theoretically at least) be capable of being used as such. This is very fully illustrated in the artificial international language Esperanto. Thus *kat* is " cat ", *in* is " female ", *id* is " offspring ", *et* is " small " and -*o* is the sign of a substantive. From these elements we can have varied combinations: *kat-in-o* (a cat, not a " tom "), *kat-id-o* (a kitten), *kat-id-et-o* (a small kitten), *kat-in-et-id-o* (the kitten of a small female cat), and so on. This principle is seen occasionally in the inflected languages also, e.g., in the later Sanskrit forms of the future, **भवितास्मि**, **भवितास्वः**, **भवितास्मः**, etc.

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[1] Like the Persian possessive and objective pronouns: *kitāb*-**am** (my book), *kitāb*-**ash** (his book); also *dīdam*-**at** (I saw thee). In the older language the *subject* pronoun is sometimes incorporated, e.g., *girift*-**ash** *yaki sang* (he took up a stone); see Platts and Ranking, *A Persian Grammar*, pp. 50 ff.

[2] Used colloquially chiefly by the Parsis.

[3] The *written* language shows this only partially and in a few cases only.

[4] Cf. the colloquial English *ain't it*.

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[1] *The Science of Language*, Vol. I, pp. 421-22.

§ 23. *Subdivisions of the Agglutinating type.*

Agglutinating languages can be further subdivided according to the method of agglutination. In all cases the principal element of the word is preserved *full* and unchanged, and the modifying elements may come either in the beginning, or at the end, or in both positions. Thus we get three types, (i) *prefix-agglutinating*, (ii) *suffix-agglutinating* and (iii) *prefix-suffix-agglutinating*. To complete the classification we must add a miscellaneous class under the designation (iv) *partially agglutinating*.

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[1] Op. cit., pp. 426-28, were the whole set of 24 such forms are explained. If in the last form we put *eme* instead of *me* it would denote " impossible to be brought to love one another " (ibid, p. 428).

(i) *Prefix-agglutinating.*

The *prefix-agglutinating* languages dominate Africa south of the equator. They form a closely allied and well-defined group known as the Ba-ntu family. They are distinguished by having *prefixes* in place of what we call "terminations" (**प्रत्यय**). These prefixes are governed by elaborate laws of concord which give to them a remarkable alliterative effect. Thus the sentence, "our man appears handsome, we love him," is, in Kafir:

umu*ntu*	**we***tu*	**omu***chle*	**uy***abonakala*	**sim***tanda*,
man	our(s)	handsome	appears,	we-him-love.

In the plural this becomes,

aba*ntu* **be***tu* **aba***chle* **ba***yabonakala* *si***ba***tanda*.[1]

The alliterative concord which follows from this type of agglutination forms a characteristic feature of the Ba-ntu family.

(ii) *Suffix-agglutinating.*

In the suffix-agglutinating type we have the suffixes piled up one over another, as we saw above in the examples from Turkish. Languages of this type are among the most widely spread in the world. There are three chief families of this type, the *Ural*, the *Altai* and the *Dravidian.*[1] The latter group is of great importance for India, as these languages have profoundly influenced the Indo-Aryan languages of India and have in turn been influenced by them. These languages seem to have advanced to a stage where, in many instances, the suffix seems to have lost all trace of having been originally an independent word. But the agglutinating character, i.e., piling several suffixes together is very clearly marked. Thus, in the inflecting languages in the declension of nouns the number and case are united in one suffix, but in the suffix-agglutinating languages there is a separate suffix for the number and another for each case. This difference is clearly seen in comparing the plural declension in Sanskrit and Kannaḍa.

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[1] Tucker, op. cit., p. 140. The sound concord noticeable here is also seen in the inflected type, but there the *ending* is similar sounding, see, for example, *Raghuvaṃśa*, i. 5-9.

	Sanskrit.	*Kannaḍa.*[2]
Nom.	सेवकाः	*sevaka--ru*
Acc.	सेवकान्	*sevaka-rannu*
Ins.	सेवकैः	*sevaka-rinda*
Dat.	सेवकेभ्यः	*sevaka-rige*
Abl.	सेवकेभ्यः	(wanting)
Gen.	सेवकानाम्	*sevaka-ra*
Loc.	सेवकेषु	*sevaka-ralli*

Here the *-r-* running all through the Kannaḍa forms is the sign of the plural. If we put *-n-* throughout in place of the *-r-* we get the singular forms.

(iii) *Prefix-suffix-agglutinating.*

The Prefix-suffix-agglutinating type is fairly widely spread and includes the various families of languages of the Pacific Islands and extends across the Indian Ocean as far west as Madagascar. There are several distinct groups to be distinguished in this type. Of these the *Malayan* branch shows suffixes, infixes and prefixes freely attached. The last however predominate. The other groups are characterised by suffixing possessive pronouns. The chief characteristic of this type, as noted by F. Müller, is that "the element which corresponds to the roots of other languages appears regularly as a dissyllable, and where it occurs as monosyllable, we are justified in believing it to have arisen from a dissyllable by phonetic loss".[1] The parts of speech are not determined by the form of the word itself, but more by position.[2]

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[1] Some writers have tried to find a connection between these three families The resemblances are indeed striking, but it would be fair to state here that their relationship is not yet proved.

[2] See Spencer, *Kanarese Grammar*, p. 20.

The syntax of these languages is also interesting, the most notable device being reduplication.

(iv) *Partially agglutinating.*

This type contains a lot of miscellaneous languages of which the exact relationships are not quite clear. Of these the *Polynesian* group of languages are remarkable in having been originally agglutinating and closely allied to the Malay group,[3] in which the agglutination was broken up by contact with other races speaking a different type of languages. Some of these border on the inflecting, some on the isolating and some on the incorporating types.[1]

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[1] Quoted by Tucker, op. cit., p. 143.

[2] A peculiarity shared by Chinese. Also in English we find words like *profit*, *love*, *walk*, *drink*, *good*, which may belong to one or the other "parts of speech" according to the context. This marks an advance towards the analytic stage.

[3] As a matter of fact, modern writers have grouped these two together and called this group the *Malay-polynesian*. Tucker says (op. cit., p. 141) that these languages, "If taken alone would never be classed as agglutinative, inasmuch as they express grammatical relations by means of free particles after the manner of the most advanced analytical tongues, such as English".

§ 24. (III) *Inflecting languages.*

The third main type, known under the general name of *Inflecting Languages*, is distinguished from the other main types in the very important respect that in these the relations of words to each other in the sentence are indicated by the addition of syllables or letters (mostly as suffixes) and these affixes show no traceable signs of having been independent words even when traced back as far as they can go.[2] The suffix is an essential and integral part of the word as it were, amalgamated with the word.[3] This type includes a twofold division. In the one flexion, i.e., the grammatical element, is mainly *internal*, in the other it is mainly *external*. These may be called *dynamically varying* and *dynamically unvarying* respectively. There is, however, no relationship necessarily implied between these two: they have been placed together merely for convenience of classification.[4]

(i) Dynamically varying, i.e., possessing internal flexion.

In this type there are a certain number of suffixes and prefixes, but in addition, and in fact principally, the syntactical relations are indicated by a variation of the vowels within the body of the word itself. The "root" in these languages consists of three consonants and these form the constant element in all derivative forms. The vowels needed to make the word pronounceable at all indicate the grammatical relationship. " The purely lexical element......lies in the consonants, the grammatical in the vowels".[1] For instance from the root **qtl** we get **q*a*t*a*l*a*** (he killed), **q*u*t*i*l*a*** (he was killed) ***ya*qt*u*l*u*** (he kills), **q*ā*t*i*l** (killing), **q*i*tl** (enemy). **q*i*t*a*l** (a blow), etc. The great family of *Semitic* languages belongs to this type, and the very nature of this type makes it a fairly stable one and the languages show a uniformity and closeness of resemblance much greater than is found in any other family. The other great family of languages, *Hamitic*, is included in this type by some, although it shows but faint traces of this special characteristic. Like the Polynesian group the Hamitic has lost its special structure[2] owing to foreign influences. But this family must have separated from the original Semitic many thousands of years ago.[3]

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[1] *Japanese* and the *Caucasian* family are examples of the first kind, *Haussa* of the second and *Basque* of the third.

[2] The history of suffixes like the English *-ly* (originally *like*) leads us to suppose that other suffixes have had a similar history, but there is no clear historical proof available for the vast majority of these.

[3] Hence the name *amalgamating-inflectional* (as distinguished from *agglutinating-inflectional*) used by Tucker.

[4] Attempts are being continuously made even since the "discovery of Sanskrit" to trace a connection between the Semitic and Indo-European families, but they have not been quite successful. Some years ago, a very remarkable book on the subject had appeared, *Die Entstehung des semitischen Sprachtypus* by Dr. Harry Torczyner (Vol. I, 1916).

The Semitic languages in course of their long history show a distinct development from the original synthetic to the analytic type. In other words, instead of depending solely on the inflection the tendency is to drop them, and the meaning (as in modern Hebrew) depends, more and more upon the position of the words in the sentence.

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[1] Misteli, quoted by Tucker, op. cit., p. 161.

[2] But it bears great resemblance to Semitic in three particulars: (1) the pronouns, (2) the plural suffixes and (3) the affix *-t* for the feminine. These can hardly be accounted for unless we assume a common origin. See Tucker, op. cit., pp. 159-160; see also Chap. XIII, § 254 (i).

[3] The ancient Egyptian is classed as Hamitic, but it is so close to the Semitic that it might be put on the border-line between the two. Indeed, some regard it as definitely Semitic. See Chap. XIII (§ 242).

(*ii*) *Dynamically invariable, i.e., with external flexion.*

Inflecting languages of the second type are those in which the flexion is external and entirely of the suffix-variety.[1] In this type we do not get the trilateral roots and the internal variation of vowels, as in the Semitic. To this group belongs the Indo-European family of languages To this family belong many of the best-developed and the most cultured languages of the world. Like the Semitic group they show an earlier synthetic stage, which later on is replaced by the analytic.

As this is the most important family for the purposes of linguistics[2] it would be well to enumerate here some of its most important characteristics.

§ 25. *Main characteristics of Indo-European languages.*

(i) *Suffix-in-flexion.*

The inflection is in all cases terminational, i.e., with the help of suffixes. As far back as we can trace these suffixes we fail to discover any independent meaning in the vast majority of cases. But from a few examples[3] we may, by induction, conclude that they might have existed at one time as independent words, which were originally agglutinated, and owing to their being broken up through phonetic and other causes these modifying elements became mere syllables without any meaning and were occasionally reduced to a single letter only.[1] But though inductively the argument is sound enough, we cannot give any definite historical proof that the inflections of the Indo-European languages were originally independent words.

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[1] There are prefixes but they are only modificatory of *meaning* and do not affect the syntactical relationship between the words. See below § 25 (iv).

[2] The languages of this family have been worked out in greater detail and have been studied during a longer period than those of any other family.

[3] Such as English *-ly*, or the so-called case-suffixes in Modern Indo-Aryan.

(ii) *Originally synthetic in structure but getting more and more analytic in course of development.*

In the I.-E. family the suffix is definitely an integral part of the word and forms with the "root" a grammatical unit. Hence, the root being necessarily the most important part, the kernel, as it were, of the word, the suffix suffers the most in the course of the variations which must naturally come about in every language. We, therefore, soon reach the stage when phonetic and other changes have corrupted the forms to such an extent that the suffixes get confused and are even entirely lost. And in their place we get prepositions, auxiliary verbs, adverbs and other adjuncts. The languages thus progress from the synthetic and purely inflectional to the analytic and positional type. The history of most of our Indian Vernaculars has been in the main, along this line.[2] The development of Modern Irānī is another excellent example of this progress towards the analytic.[3] English also shows a similar history.

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[1] For instance the स् in the *s*-aorist, the न् inserted in the 7th (रुध्) class of Sanskrit verbs.

[2] This is notably the case with modern Bengali which is clearly analytic. The other Vernaculars have had a varied history and have not advanced far enough to be so completely analytic. Among the retarding influences may be mentioned that of the Pāṇinian Grammar, for on this as model all our Vernacular Grammars have been based.

[3] It has been rightly said that the whole of the formal grammar of Modern Persian may be written down on a sheet of note paper. See the "Epitome of the Accident" given at the beginning of W. St. Clair-Tisdall's *Modern Persian Conversation Grammar*.

(iii) Monosyllabic roots built up into words by the addition of Primary and Secondary suffixes

The "roots" in I.-E. are monosyllabic. But they are not to be thought of as having an existence apart from the suffixes. The variety of the latter is large enough in the older languages, to serve the most varied needs of human thought. And we find that we can have suffixes piled up one after the other.[1] This is probably another reason for inferring that these forms were originally of the agglutinating type. The suffixes may be further subdivided into primary (कृत्) and secondary. The latter are of several types such as word-building suffixes (तद्धित), case-indicating suffixes (सुप्-प्रत्यय-s) and verbal suffixes (तिङ्-प्रत्यय-s).[2]

(iv) Syntactical prefixes unknown

Prefixes for syntactical purposes are quite unknown. The prefixed forms are really in origin of the nature of compounds. The *upasargas* in Sanskrit (as also the corresponding verbal prefixes in Greek, Latin and Germanic) modify the *meaning* of the verb, but have no special syntactical signification. They could be separated in the Vedic (as in Greek) from the verb and could even (as in the case of the augment अ)[3] be omitted.

(v) Power of making true compounds.

The most notable characteristic of the I.-E. family is the power of making compounds. This is not mere juxtaposition (as with the Semitic type of compound),[1] but the words joined together have clearly-marked *syntactical* connections. In true compounds all syntactical suffixes are omitted.[2] The meaning of the whole compound is not merely equal to the sum of the meanings of the words making up the compound,[3] but the meaning is a resultant, so to say, of the syntactical relations between the words as implied by the suffixes which have been omitted. In fact we may regard the compounds of the I.-E. (notably the huge ones found in "classical" Sanskrit and in Welsh[4]) as bits of the sentence expressed in the analytic manner.

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[1] E.g. श्रावयिष्यध्वम् (*Mahābhārata*) which is root+causal sign+future sign+second person plural suffix. Forms like कर्तृभिः show also root+primary suffix+case suffix. Compare this with the Turkish type of agglutination given above (§ 22).

[2] For details see Chap. IX.

[3] Giving the so-called "improper subjective" (Whitney, *Sanskrit Grammar*, § 563). Note that in this case the prefix is *omitted* for syntactical reasons.

(*vi*) *Vowel-gradation.*

Another characteristic and well-marked feature of the I.-E. languages is the phenomenon known as *Vowel-gradation*. This originally was the result of the accent system of the I.-E.,[5] but with the dropping out of the suffixes very often the vowel-change has been the only sign left of the flection, as in the English strong verbs,*drink*, *drank drunk*, etc. In the Semitic the vowel-variation is *syntactical* and hence has persisted practically unchanged all through the history of these languages. In the I.-E. this has not any special syntactical signification but is rather the result of *phonetic* change produced by the accent.

[1] See Tucker. op. cit.. p. 163, ftn. 1, also Chap. XIII (§ 255 viii below.

[2] The exceptions are the compounds of the अलुक्-type, which are among the earliest type of compound.

[3] As with the द्वन्द्व. In Hebrew compounds the relationship implied between the components is that of "object" or of "possession"; both, it may be noted, are relations of the simplest type. See also Chapter IX.

[4] The famous name of a Welsh village in the Isle of Anglesea is *Llanfairpwllgwyngyllgogerychwyrndrobwll-llantisiliogogogoch* and it means "The church of St. Mary in a hollow of white hazel, near to the rapid whirlpool, and to St. Tisilio church, near to a red cave." The post-office regards the first twenty letters to be enough on an envelope!

[5] See Chap. VIII (§ 136).

(vii) *Flexions in great variety*

The whole of the syntactical relations being entirely indicated by flexions in the I.-E. and there being a separate flexion of each individual relationship, naturally a very large variety of these developed in this family of languages. Hence when the various languages had branched off, each developed along its own special line taking up from the original store of flexions only those which it needed. Thus we see, even at the earliest stages of the various branches, that all the suffixes are not common between these separate branches. The breaking down of older flexions was often followed by introduction in many cases of new ones and these new ones could hardly be expected to be common between any two languages. To this reason chiefly is due the exceedingly rich variety of suffixes when we consider the I.-E. languages as a whole.

- Languages ...
  - Inorganic (Positional or Isolating)
  - Organic ...
    - Incorporating (Holophrastic or Polysynthetic).
      - Completely incorporating
      - Partially incorporating
    - Agglutinating ...
      - Prefix-agglutinating
      - Suffix-agglutinating
      - Prefix-suffix-agglutinating
      - Partially agglutinating
    - Inflectional ...
      - With internal flexion (Dynamically varying).
        - Synthetic
        - Analytic
      - With external flexion (Dynamically unvarying).
        - Synthetic
        - Analytic

TABLE I.—LANGUAGE TYPES.

CHAPTER III

SOME CONSIDERATIONS OF SYNTACTICAL GROWTH[1]

§ 26. *Language begins with the Sentence.*

We have already described in the first chapter[2] how the power of drawing concepts from a large number of percepts characterises the human being and differentiates him from the average animal. We also saw that after these concepts are drawn human beings can communicate their thoughts to one another by putting two or more of these concepts together. This we call a sentence. This is the beginning of "language" as we usually understand the word. We have also seen that the ***sentence is the unit of language***, and that languages are classified according to their sentence construction.[3] We may now consider this question in some further detail.

§ 27. *Progress of an infant acquiring language is an epitome of human linguistic history.*

It is a well-recognised scientific truth that the human child during the few weeks of its embryo-state passes successively through all the important stages through which the human race has attained its present physical body. Similarly, during the first few weeks of life the infant acquires successively the various emotions which humanity has taken several hundred thousand years to acquire during its march onwards since the time it first emerged upon earth.[1] The gradual development of the infant mind is, as it were, an epitome of the history of the progress of the human mind. Exactly in the same way the acquiring of language observed in an infant would give us some idea of how humanity has progressed in attaining articulate speech.

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[1] The substance of this chapter was communciated in a paper sent to the Fourth All-India Oriental Conference at Allahabad held in 1926. It was entitled "The Main Lines of Language Growth".

[2] §§ 7-9.

[3] §§17-20.

§ 28. *Stages in the linguistic growth of an infant.*

The cry of a new-born child is merely a reflex due to purely physical needs. Feelings of hunger, discomfort, pain etc. call forth the cry automatically. There is no thought behind it, no object for which it is uttered. It, however, serves a definite purpose; it draws the attention of the mother (or nurse) and results in the removal of the cause which gave rise to it. Thus the cry and the removal of an unpleasant feeling are associated together in the child-mind. Henceforth the cry is uttered with a definite object in view, with a meaning in fact, and we get the first beginning of language. But we cannot still call this "language". It may now be called an *animal-cry* to distinguish it from the *reflex-cry* of the preceding stage. We find that many animals, especially those of the gregarious type, have a definite set of cries, which have each a definite meaning. This stage of animal—cries begins very early, within a few days of birth, and continues comparatively long. In fact, this stage lasts until the child has acquired considerable control over its vocal apparatus.

The child all along tries to imitate the sounds it hears from others who attend to it. This gives the child control over its vocal chords and muscles and it gradually acquires facility in reproducing certain sounds which are most frequently heard.[1] But in the beginning the child has no idea of "words" as such. To the mind of the child each situation, as it arises, demands a set of sounds which it tries to imitate, but which it cannot analyse into its components. Every mother knows the unmeaning set of sounds she has to use for "baby-talk". And babies are known to go on babbling at great rate, and often at great length, as if they were trying to make us understand what they have observed or thought of.[2] But the things they utter, though doubtless they have a meaning for the speakers, are mere unmeaning prattle to the elders. They may be called *sound-jumbles*. These sounds well forth spontaneously from the child in response to its feelings. We often observe even grown-up children when they are excessively happy crooning out unmeaning words to themselves.[3] They form the vocal expression of the child's emotions and they serve children pretty well even for carrying on conversations with one another. If there are a lot of young children in a family they often develop a language of their own, which is their own cherished secret, and to which elders are admitted only if they are "very good", and as a mark of special favour. This baby-language at first is merely "sound-jumble", and even after children have learnt the use of words they may go on coining new jumble-words.

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[1] See Drummond, *Ascent of Man*, for a very fine treatment of this aspect of human progress.

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[1] It seems that the simple vowels are first acquired and among consonant sounds the labials come first. Hence the earliest child words are *pā*, *bā*, *mā*, etc. Jespersen in his *Language* gives a very exhaustive treatment of child-language.

[2] I had that experience with my son (aged nine months or so) one day. He had come back from his outing one evening and there he had seen (as I ascertained from the nurse) a procession with banners and music. This had evidently excited him and for half an hour after coming home he held forth to us about all he had seen and heard. He had, indeed, given us a "baby-lecture".

[3] The same idea is conveyed by Kipling about Mowgli's song when he had slain Sher Khan, "a song that came up into his throat all by itself" (*Jungle-Book,* the story of "Tiger, Tiger").

All this time the human brain the child possesses goes on developing; and soon after the "sound-jumble" stage, the sense of separate words begins to dawn upon it. Of course, the child draws its own common factors from a number of sense-impressions, and invents its own sounds to indicate these. In other words, it begins to have concepts and learns to grasp what words may mean. The elders would be necessarily helping the baby at this stage by uttering individual words and pointing out the object. As soon as the power of thought (drawing of a concept from percepts) is exercised, further progress is assured and is naturally easy. This stage is seen to begin in the child when it begin to use *articulate words*. And from that period onwards it is merely a question of time.

One important fact is to be constantly borne in mind, viz., that all through this process of acquiring the language the child *thinks in sentences*, never in individual words. It is also remarkable how a child can acquire more languages than one simultaneously; and very seldom are the languages (i.e., the sentence-construction) mixed up, though words may be confused.[1]

§ 29. *Primitive speech: (i) the Animal-cry stage.*

From the above considerations regarding the linguistic growth of the child, we may confidently draw some conclusions about the primitive speech of humanity. Of course, anything in the nature of a record of that stage is an utter impossibility. But we may be justified in assuming that just preceding the emergence of *Homo Sapiens*, the human being must have uttered mere animal-cries. These cries variously modulated may have acquired definite meanings. These may have been accompanied by gesture to a greater or lesser extent.[1] How long this stage lasted it is difficult to say. But as soon as *Homo Sapiens* comes on the stage we get language in the correct sense of the term, inasmuch as from now on there is a thought—a purpose—behind the sound uttered. Rightly has Marett said that man "tried to make a speech as soon he had learnt to stand on his hind legs".[2] The meaning of this is that the upright stature of man is accompanied with certain developments of the brain—both as regards the size of the brain cavity as well as the quality of the grey matter. These latest developed parts of the brain are those that control the speech centres.[3] And side by side with the power of speech there arises also the power of drawing the concept.

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[1] This is the principle lying at the bottom of the "direct-method" of teaching languages. The idea is to teach the learner *to think* in the language. The vocabulary is acquired gradually and *grammar comes last of all.* That was the reason why the Greeks never taught nor compiled any grammar of their onw language. It was unnecessary.

§ 30. *Primitive speech: (ii) the Sound-jumble stage.*

The animal-cries of "primitive man" would necessarily have been confined purely to the expression of animal instincts—hunger, sleep, fear and ex-impulse.[1] And at this stage, indeed, they do not deserve the name of speech, nor should the utterers of these cries be dignified by the name of human beings. Humanity really begins with the upright stature and the control of speech organs. The power of thought, which goes with the power of speech, is also now present, but *it is latent*. It is by generations of development and by the continuous exercise of this faculty that the power of thought develops enough to give words to a language. And just as we saw in the case of the infant, humanity, too, has passed through a sound-jumble stage. Luckily we possess among the languages of the world today such "sound-jumble" languages, which, as might be expected, are used by the most primitive human beings living at present. These primitive human beings certainly possess the *latent capacity* of drawing concepts from percepts, but this has not been developed, just because their lives are practically confined to the four animal impulses enumerated above; and so the need of articulate expression of their feelings is also strictly limited. Of course, they are constantly receiving sense-impressions from their environment but the need of putting these into words would arise but in a few cases. With this limited linguistic need these people are quite able to live their lives in the "sound-jumble" stage with one "sound-jumble" for each individual sense-perception they need to express in words. The people of the utterly remote "end of the world", Tierra del Fuego, do possess a language made up of "sound-jumbles", each one representing a *percept* ; and this language has never a concept and hence no "word". If one of the people of this region sees a fish and then he catches the fish, his wife cooks the fish and the family eat the fish and they find the fish tastes nice, then, for each of these five sense-impressions, he would use an absolutely independent "sound-jumble". Not one of these five would have the faintest suggestion of having something in common (in the present case, "fish") with the rest. Their minds have had no practice in drawing these common factors from sense-impressions (in other words, concepts from percepts), hence each of their "sound-jumbles" is an independent unit. The slightest change in the sense-impression—if, for instance, he sees two fishes instead of one—would necessitate an entirely distinct "sound-jumble". Each utterance of these people, in short, represents *one single perception taken as a whole in all its details*. These may sometimes be quite complex. Thus Marett quotes from the language of these same people the remarkable "sound-jumble", ***mamilhapinatapai*** which means "two-people-are-looking-at-each-other-hoping-that-either-will-offer - to-do - something - which-both-desire-but-are-unwilling-to-do".[1]

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[1] The development of gesture language is a parallel growth and is equally primitive. Gesture language is a common possession of all humanity and is universally understood. Among some tribes of the North-American Indians, however, it has attained very great development. It seems likely that there was a period of human history when animal cries were helped on with gestures, but I do not think that there was a period when gesture alone was used and humanity was completely dumb.

[2] *Anthropology*. p. 132.

[3] Consult F. W. Mott, *The Brain and the Voice in Speech and Song*. There is a good diagram (fig. 17) facing p. 74 of the book showing the "speech zone" in the human brain and a good explanation of it is given on p. 74.

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[1] आहारनिद्राभयमैथुनं च सामान्यमेतत् पशुभिर्नराणाम्। (*Hitopadeśa*)

§ 31. *Primitive Speech: (iii) the Holophrastic stage.*

Marett describes the language of the Tierra del Fuegians as "holophrastic" or "incorporating". In it each utterance (one could hardly call it either a "word" or even a "sentence" in the strict sense) consisting of a number of sounds, "into which are packed away enough suggestions to reproduce the situation in all its detail, the act, the person who did it, the instrument, the time, the circumstances, the place, and who knows what besides".[2] I would rather reserve the term "holophrastic" to the slightly more advanced stage of language and call the most primitive by the name "sound-jumble". The very definition as given by Marett implies that each of the component parts is felt (however dimly) to be a *separate* concept. But such is not the case with the language of Tierra del Fuego. The true stage of holophrase would begin when once there arises the dim perception that the whole situation is capable of being analysed into component parts such as the act, the actor, the time, the place, the circumstances, etc. Then one would begin to group together the various components perceived in various sense-impressions and the first step towards the drawing of concepts would be taken. The latent power of thought (the *lógos*) in the human brain would then be stirred and we would get more rapid progress. Among the languages of the world we have most of the American languages at this stage of development. Thus in the Old Huron-Iroquois language we get the following holophrases:

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[1] Marett, op. cit., p. 140.

[2] Loc. cit.

eschoirhon (I-have-been-to-the-water);
setsonha (go-to-the-water);
ondequoha (there-is-water-in the bucket);
daustantewacharet (there-is-water-in-the-pot).

Though the stranger fails to discover here any common factor in the actual *sounds* uttered, still the speakers are quite aware of the common factor—the concept, "water". This is proved by the fact that they have an independent "hypothetical word" for "water". By this is meant that the word (*awen*) is recognised in the language as the label attached to the concept "water", but it is never used either by itself or in a sentence. This is the earliest stage when there is the recognition of the concept and there is a label (though hypothetical) attached to it.

The next step forward is when this common factor is also realised as a common factor in the spoken sounds. Here we get full holophrase. Thus, in the Cherokee we get *nadholinin* (bring us the canoe) which can be analysed into the full concept-words **naten** (bring), *amokhol* (canoe) and **nin** (we).[1] This is true "holophrase".

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[1] Op. cit., p. 141.

§ 32. *The Word-stage of language.*

After this stage comes the full word (the [illegible]) which is the label of the concept. It requires generations of steady mental growth to reach this stage. Those of us who possess fully developed languages find it hard to realise how a language can exist without words. And even when words come they are at first but names of *concrete* concepts. And even these concrete concepts are not what we may term "pure". There are many concrete objects which the primitive mind cannot conceive of as apart from the possessor. Thus there are distinct words in many languages for "my hut", "your hut", "his hut", "my father's hut", "his neighbour's hut" and so forth, but no single word for "hut". This is but one way in which the "percept" goes on persisting. Though considerably narrow in comparison to the "sound-jumble" stage, the percept of the thing possessed still remains intimately bound up with the possessor. So also the concept of number does not exist apart from some concrete objects enumerated. Thus we notice the curious fact with many primitive peoples that though they cannot count (*in the abstract*) beyond four, they can accurately enumerate quite a large number of specific objects, such as cocoanuts or shells.

§ 33. *The process of drawing concepts is continuously going on in language.*

The use of the power of thought (the concept faculty) does not stop with the emergence of words in a language. The human mind goes on continuously grouping and regrouping its percepts and concepts and goes on drawing new "common factors" from these fresh groups. Thus new concepts—new words—go on arising. First, as we saw, these indicate concrete material objects, but they are not quite pure. These may be called "compound concepts"—where two or more items are grouped together as one single concept. Such for instance are the words which indicate the possessor and the thing possessed, the object and its number, the verb and its subject. In short, the holophrastic stage continues for a considerable time even after "words" have come. But the constant regrouping that is going on in the minds of speakers results in a continuous analysis of these compound concepts. and they gradually break up into their component parts.

Still the concepts are strictly material and concrete. The abstract concepts come much later, and probably these also pass through a stage of "compound abstract concepts". The history of thought in any great nation could give ample evidence of the growth of these abstract concepts. The use of metaphor in language, especially in case of words denoting abstract ideas, is sure proof of this gradual growth.

§ 34. *The three types of sentences.*

Leaving now the growth of abstract terms, we may come back to the sentence. Sentences, as we understand them, begin with the "word-stage". Every sentence in its simplest form must contain two concepts expressed or implied, or otherwise understood from the "logic of circumstances". Thus if a person suddenly come into a room and says "Dog", he would be naturally asked, "What about it ?" But if a visitor comes into the room and the master says to the servant, "Chair", the circumstances convey the full sense. This is the simplest type of sentence, when two concepts are joined together. Usually one of them is known to both the speaker and the hearer and the other is what conveys fresh information to the hearer. The first is the *subject* and the second is the *predicate*.[1]

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[1] It is to be carefully noted that these two words are *not* to be understood in the grammatical but in the *psychological* sense.

From this simple beginning we get more complex types of sentences. Thus, instead of one "subject" we may have several and they may be connected with one or more "predicates". And in such complex sentences several of the subjects may stand in different relations with the different predicates.

We have therefore to consider how these different types of relationship of the subject and the predicate in a sentence are to be indicated. And according to the method employed we get the three types of sentences—(i) Isolating, (ii) Agglutinating and (iii) Inflecting. These three are the only types known to us and any particular language represents one type predominantly. We have already seen the distinctions between these three types and these need not be repeated here.[1]

§ 35. *These three types are not necessarily connected.*

The older writers on linguistics had a theory that these three types (Isolating, Agglutinating and Inflecting) were three stages in the progress of languages and that the Inflecting type passed again into the Isolating. This theory seemed to round off everything so well that it continued to be upheld till quite recently. It was held that primitive language was isolating in structure and it gradually passed into the agglutinating stage through some words (the so-called empty-words [2]) being regarded as suffixes in course of time. The agglutinating suffixes would thus in turn fuse into inflecting-suffixes. The inflections finally would in course of time "decay" and give us back the isolating stage. But there is not a scrap of proof for this theory. As far back as we can trace each type of language we see it has never been anything else. So it would be more reasonable to suppose these three types as having arisen simultaneously.

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[1] Chapter II above. It will be noted that there the Isolating (or Inorganic) type was given as separate from the Organic type which includes (I) Incorporating (II) Agglutinating and (III) Inflecting. This is because there the question was not considered from the view-point of the evolution of language.

[2] Such as exist in Chinese, see Chap. XIII, § 252 (iv).

§ 36. *The Isolating type.*

In this type of language all relationships are indicated by position. And the growth of concepts (especially of the abstract concepts) can be very well illustrated by comparing together the Sudan languages of Africa and Chinese both of which belong to this type. The former are completely lacking in prepositions. There are only three syntactical relations which can be "naturally" expressed by position without the help of other words. These are the relationships of (i) subject (agent) and verb, (ii) object and verb and (iii) possessor and thing possessed. When other relations—such as instrument, location etc., are to be expressed these have to be paraphrased in terms of the three mentioned above. Hence the roundabout periphrases needed to express what to us seem very simple sentences.[1] In Chinese on the other hand the "prepositions" are fully developed and these help to fix the relationships accurately. Now these little words express very abstract concepts relating to the connections between concepts (*i.e.*, relating to syntactical connections). And the primitive speakers of the Sudan languages have not risen to that height, which the far more civilised Chinese have attained.

§ 37. *The Agglutinating type.*

This type includes the greater number of the languages spoken in the world to-day. These are second only in importance to the languages of the inflecting type. In this type the relationships between the parts of a sentence are indicated by formal elements (either prefixes or suffixes) and in most cases there are as many of these as there are relations or modifications needed to be expressed. Thus, if we have to express the idea of genitive singular, there would be two suffixes needed, one for indicating singular and the other for possession, and in the genitive plural the one suffix would indicate plurality and the other would remain the same as in the singular. This gives to the agglutinative languages a clarity of expression which constitutes their marked feature.[1] The syntactical relationships are, as it were, analysed and each of them receives appropriate expression in an affix. Whether these suffixes were originally independent words (as some maintain) or not might be left an open question because there is no positive evidence about it. In the better developed of these languages the prepositions are also fairly well developed.

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[1] See Chap. XIII, § 288 (v).

§ 38. *The inflected type.*

This type is in many aspects the most important, for to it belong the most highly developed languages as well as those possessing the finest literatures. There are three "families" of these languages—Hamitic, Semitic and Indo-European, and evidence seems to be gathering that all these three may have been derived from a common stock. Confining ourselves, however, to the Indo-European languages only we see some remarkable points. In these languages the syntactical relations are indicated by suffixes which are found in great variety. Many of these indicate some very complex ideas. In fact it seems as if the early suffixes denoted a set of complex syntax relations. We may almost call these "*percepts* of syntactical relations"; and each suffix expresses only *one* of these even though it may be a complex one. Not only that, but a slight change in it (for instance from singular to plural) demands a complete change of the suffix. This is the main reason for the large number of grammatical suffixes found in the Indo-European languages. Each of them represents a complex percept of syntactical relations.

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[1] See examples given above § § 22-23.

39. *The rise of Prepositions.*

As language progresses these suffixes tend to form groups and these groups give rise to new concepts which may get new labels. These latter would express abstractions and some of these would express very elusive relations. These are what we call in grammar "prepositions" and other modificatory particles. Take for instance the three English sentences: "I cut fruit *with* the knife", "He took a walk *with* his friend" and "I walked out of the shop *with the book*". In each of these we have an idea expressed by "with", which is a common factor in all the three, but it is somewhat difficult to catch this common idea, which is "accompaniment of the action". In some languages these three sentences would be expressed by the use of three different case-endings. Even in Sanskrit, though only one case (the instrumental) might be used, still for the last it would hardly be called idiomatic Sanskrit, and the use of सह in the first would be regarded as wrong. In idiomatic Sanskrit these would be: (i) कर्तर्यां फलमकृन्तम् (ii) मित्रेण सहाभ्राम्यम् and (iii) पुस्तकं गृहीत्वा पण्यविपणेर्गतोऽहम् It does, indeed, take a long development in thought processes to arrive at the prepositions and other *avyayas*. The Indo-European languages even in their early period are very rich in words of this type indicating that the people using these had attained a level of thought much higher than that of mere savages.

§ 40. *Auxiliary verbs.*

What we saw above, was with reference to nouns, pronouns and adjectives. With verbs the syntactical relations refer to what are called "tenses" and "moods", i.e., to the time and the manner of the action. The state of mind of the speaker or actor is also sometimes considered. All these varied relations are expressed in the older Indo-European languages by different verbal suffixes. But in course of time the finite verb[1] is replaced more and more by participles, infinitives and with auxiliaries forms. This change is very well exemplified in the history of English and in that of the Modern Indo-Aryan as compared with Classical Sanskrit. The auxiliary verbs were originally independent finite verbs like the rest, but with the grouping together of the senses of the various moods and tenses they came to acquire new meanings and fresh functions.

§ 41. *From Synthesis to Analysis.*

This process of *analysing* the syntactical relations is doubtless helped by the fact that a good many of the finite forms of the moods and tenses in the older languages (as in Sanskrit, Latin and Greek) differ only by fine shades of meaning. So they tended to overlap and get confused with each other. It is often difficult in the older texts to say exactly why a subjective or an optative or an imperative has been used, or why an aorist or a perfect. Similarly with the cases it is often difficult to know the exact reason why one particular case has been used rather than another. This overlapping of meanings between different forms caused a good deal of confusion in the syntax,[2] and simultaneously the prepositions and auxiliaries which had already come into use acquired a clearer meaning. Thus the transition from the synthetic stage (where the syntactical relations were indicated by *putting together*[1] the root and the ending) to the analytic (where these relations were *analysed* into more or less fundamental concepts) was achieved. Every language passes through this change. With some the change is extremely slow because this process has been retarded by geographical isolation and other causes. With others the change has been extremely swift because there has been early contact with other languages.

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[1] The forms of the "tenses" and "moods" of a verb are called "finite", as each of them has a definite meaning.

[2] The syntax of the *Brāhmaṇas* in Sanskrit is extremely interesting from this point of view. So also the syntax of the *Vendīdād* shows

§ 42. *Examples of this process: (i) Lithuanian.*

Among the I.-E. languages to-day Lithuanian shows a nearly complete synthetic structure and it can best be compared to Vedic Sanskrit. This means that this language has remained practically stationary during the past three thousand years or so. The reason for this is seen in the nature of the land itself. It is a country full of fever-ridden swamps and impenetrable forests. The slight extent of sea-coast it possesses is not of much use for commerce, because the sea is frozen for more than half the year. Besides, the country is not particularly rich in any kind of produce which would tempt a foreign conqueror. So Lithuania has been left alone, as it were, and has had but little contact with outsiders. It came nominally under the domination of Russia, but even then the land was not attractive enough to induce the rulers to settle down there.

(ii) Hebrew and Arabic.

These two languages are very closely related and they had practically the same synthetic structure about two

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the transition from the synthetic to the analytic stage. Contact with foreign languages was doubtless the hastening cause in both cases.

[1] This is the literal meaning of *synthesis*.

thousand years ago. But to-day Hebrew is much more advanced on the analytic stage than Arabic. The Jews have been a persecuted race during these centuries and having left their original land they have wandered all over the world. Being deeply religious they have preserved their sacred texts, but in their daily life they were perforce obliged to speak the language of the land they lived in. So their own colloquial Hebrew got very mixed up and became analytic in structure.

The Arabs, too, spread over all the lands of the Old World, but they went everywhere as conquerors who imposed their language and religion upon other vanquished peoples. Their religion, too, was a great binding and conserving force and the Arab rulers of different lands formed a strongly united body, which fact also helped the preservation of the language.

So the two languages have had different histories, even though both the people were deeply religious, because the one spread over the world as wandering fugitives, the other as conquerors.

(*iii*) *Persian*

The history of Persian is also quite instructive in this respect. The language of the Achaemenian Inscriptions—Old Persian—is fully synthetic and pretty close to Sanskrit in structure. That was the period when the Achaemenians were the rulers of a vast empire and their political centre was at Persepolis—the heart of Aryan Irān. These two facts tended to preserve the court language (in which these inscriptions were composed) more or less pure. Doubtless the language of the masses must have been undergoing change owing to contact with the various races in the great empire. Then came the Macedonian conquest which put an end to the domination of Irān for nearly five centuries.

And the political centre of gravity was also shifted. We come upon Persian language again at the beginning of the Sasanian period and then we find it in the Middle Iranian stage. During the two centuries preceding the rise of the Sasanians the political centre of Irān was definitely fixed in Mesopotamia —at Ctesiphon. And this city continued to be the capital of the Sasanians as well. Hence the Middle Iranian, as we get in the beginning of the Sasanian peroid, is already a language well advanced towards the analytic type with a considerable borrowing of words from Semitic languages. This Semitic influence continued all through the centuries of Sasanian rule and soon after the Islamic conquest we find Modern Persian emerging—the most completely analytic of all the Indo-European languages.[1]

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[1] See p. 34, ftn. 3.

CHAPTER IV

GROWTH OF LANGUAGES

§43. *The chief influences affecting the growth of languages.*

The study of the growth of languages becomes one of deep interest, when we also bear in mind the races that have used them in the course of their evolution. In an elementary treatise like this one can but mention and discuss in the barest outline the main factors which have exercised an influence in the development and growth of languages.

These may be classified broadly as under:—

(i) Physical (or geographical) influences,

(ii) Racial influences and racial admixture mainly due to political and economic reasons,

(iii) Mental outlook (as a whole) of the people,

(iv) Cultural influences including religion, art and literature.

Each of these is of considerable importance and interest and it would hardly do to neglect any of these factors from our consideration.

The last-named factor is the most important one from many points of view, for it is the factor that gives stability and balance to a language.

§ 44. (i) *Physical or geographical influences.*

The physical (or what are sometimes called the "geographical") influences are of considerable importance as is well known to students of history and anthropology. It is only lately that the influence of geographical environment on culture is being studied with some attention.[1] Whether a country is a desert or is mountainous, whether it has large rivers or not, whether the sea-board is of considerable extent or not, and whether there are many large harbours along the coast, all these factors have a direct bearing on the culture and development of races. And in so far as culture is reflected in speech these have a bearing on language as well. The coldness or dampness of the climate affects the food supply, and consequently the physique, the character and the mental outlook of a people.

These factors are also reflected in the language of a people. The rigours of the frozen north made the Northmen of Europe an extraordinarily hardy race, and their coasts deeply indented by the long *fjords* afforded safe harbours to these people. Moreover owing to the lack of large arable and grassy tracts in Scandinavia, fish became an important article of diet and this naturally made these Northmen a nation of hardy sea-rovers. They spread over the whole of Europe during the first millennium after Christ and profoundly affected the ethnology, the culture and the languages of that continent.[2]

The chief physical features of Greece are her limestone mountains, which effectively cut off one small valley from another. The absence of any large surface streams[3] made communication between one valley and another a matter of considerable difficulty.[1] This led, politically, to a development of city-states and to the peculiarly aristocratic polity of most of them, for naturally the few true Greeks in each district would bind themselves in a close aristocracy for self-defence against the native population.[2] Linguistically this led to the development of a large number of mutually (more or less) unintelligible dialects.[3]

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[1] See the introduction to Helmholtz's *World History* by the late Viscount Bryce. Modern historians lay considerable stress on geographical conditions. The classic example is that of Greece.

[2] They even penetrated to the frozen coasts of Labrador and we may hope to get some day some further evidence of their presence there.

[3] Because water soaks through limestone.

§ 45. *Some further examples.* (*a*) *India.*

The examples of India and of Irān may also be considered in some detail. In India the great northern barrier has effectively prevented any influence penetrating from there, except what could trickle through the passes. It was chiefly through the north-western passes that wave after wave of various peoples broke over the fertile plains of the Indus and the Ganges. They left their mark on the culture and the languages of the peoples. The ancient tribes (among whom the Dravidians predominated) were pushed further and further back until at the present time they have been squeezed back into the extreme east, south and south-east of the peninsula.[4] The Aryans were among the earliest who broke through the Afghan passes. There were a great many such waves at "the dawn of history"; and when we come to the recorded historical inroads[1] we find the Aryan languages and Aryan culture in undisputed possession of the fertile plains of Hindustan. The language and the culture were both vigorous enough to absorb (almost completely) the foreign elements that came in with the Sakas, the Huṇas and others.[2] The increasing fertility of the soil as the Aryans passed eastwards, due to the damp, hot climate, produced ample food and gave time and leisure enough for the cultivation of the arts and crafts, as well as for thinking out the complex problems of the here and the hereafter. The drier and less fertile tracts of the Panjab necessitated a continual struggle with nature. Hence we find that as long as the Aryans were in the Panjab the literature was vigorous as also the language, and that as they extended their sway eastwards into the Ganges valley there grew up a deeper speculative philosophy and with it the language also acquired a special flexibility to express the subtle differences of human thought and emotions. With the growth of material and intellectual riches the population increased. Soon after an outlet to

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[1] Especially in the absence of the horse, which is not an animal native to Greece. The natural home of the horse is in wide grassy plains.

[2] The Greeks had originally come in from the north. We have very little information about the aboriginal inhabitants of Greece because the proud Greeks never condescended to record the customs or the history of these "helots".

[3] So great was the divergence in some cases that the Athenians thought the dialect of Macedonia to be a barbarous tongue and numbered the Macedonians among the *bárbaroi* (the barbarians).

[4] Of course this refers mainly to the Dravidians. They have however, left a remarkable "linguistic island", in Baluchistan where the *Brāhuī* language, belonging to the Dravidian family, still survives. The

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other aborigines were driven into the forest tracts of Central India (the epic forest of Daṇḍaka) and into the marshes and forests of East Bengal and Assam. No doubt this Aryan pressure stimulated colonising activities among the Dravidians and the East Bengal people in the early days and led to the spread of Hindu culture in what has been called "Greater India".

[1] Among the earliest recorded was that of Darius the Great of Irān about 516 B.C.

[2] It may be noted that as the innate vigour of this ancient Aryan culture declined, greater and greater influence was exerted both on the culture and the languages by the later foreigners. Islam and the West have both influenced India to an extent which no earlier invasion had ever done.

the sea had been found at the mouths of the Ganges, the Hindus[1] turned their thoughts towards lands beyond the eastern sea and laid the foundations of what may be termed Greater India.[2] In the south too we find the Aryans expanding, pushing the Dravidians before them. But the Aryan polity very soon recognised that these original sons of the soil were necessary for their well-being and so they were recognised as part of the Hindu social and religious world and these Dravidians helped very largely to carry the Aryan languages and culture over Greater India.[3]

But the Dravidians had been a seafaring people long before the Aryans arrived in India. Australian languages show very close affinities to the Dravidian languages and there are reasons to believe that the Dravidian people had one time colonised that land. Then again towards the west coast it was the Dravidians who maintained the sea-borne trade with the Semitic people of Babylon. The Semitic languages (Arabic and Hebrew for instance) show a lot of words from Indian languages, especially names of those commodities which were obtained from India, and in a majority of these cases the words are from the Dravidian sources. An interesting example of one such word is the name for "rice", which is evidently a loan word in all the languages of the western countries. The word was first borrowed by the Semitic people from the Tamil *ariśa* and thence through the Semitic and Greek the word has passed into all European languages.

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[1] These were the Aryans of Bengal as well from the Dravidians of the South. The latter had been already taken into the Hindu fold by the time.

[2] Especially in Java and Cambodia. The fervour of Buddhism was also a very important factor in this colonising.

[3] They had by this time imbibed sufficient Aryan culture; so that the culture they represented differed in no way essentially from that which had been carried across the seas by the northern Aryans from the Ganges delta.

Further north along the West coast there are only two large rivers, and there are very few natural harbours. Hence we find the foreign influences only among those people who lived near the mouths of those two rivers; and we find that Gujarati shows a very large percentage of pure Semitic words which came in before Islam. This is because the two great ports of Surat and Broach were situated in Gujarat at the mouth of the two rivers, the Tapti and the Narmada. In fact Broach was known to the Greeks, and even in the Babylonian writings it is mentioned as a flourishing centre of trade.[1]

§ 46. (*b*) *Irān.*

In Irān, too, the physical features have considerably influenced the linguistic development of the land. We find for example a fairly well-marked division all through history into the Eastern and the Western Dialects. Of these the former have always been more purely Aryan in their structure than the latter. The Western languages have always shown a greater admixture of Semitic words and phrases. Even the syntax was affected when the Iranian races adopted the Semitic mode of writing. The classic example of Pahlavi may be quoted. The earlier scholars were in great doubt as to whether this language was at all Aryan.[2] The homeland of Western Iranian Aryans was Fars, the fertile plateau roughly occupying the south-western part of the country, and from here vigorous races and empires took their rise in succession. Ispahan, at the centre of this plateau, was the capital of this empire for centuries, and the ancient Persepolis and Ecbatana[1] were also situated on the same plateau. The modern northern capital, Teheran, owes its rise mainly to political reasons. In the centre there are arid deserts which afford hardly any support to life, and further to the east lies the region of mountains (Kohistan), which in later ages afforded refuge to Zoroastrians. The intervening desert has effectively kept the languages of Western Irān distinct from those of Eastern Irān and of Balochistan and Afghanistan. We have also to consider the question of the change of climate and fertility of the soil even within historical times.[2] The desert has distinctly grown in extent within historical times and some of the ancient cities have been completely overwhelmed by sand. The land is practically bounded on all sides by mountains but these have always been fairly easy to cross and we find all through history various races coming in from the north-west and north-east and south-west. The main features of Irān have been on the whole of continuation of those of Central Asia. Aridity is a marked feature chiefly owing to scanty rainfall and this fact makes this region one "in which cultivated districts capable of sustaining population are rare and far apart".[3]

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[1] Bombay, of course, existed as a cluster of rocky islands long before the British period. The possibilities of the harbour had long been known, for the northern parts of Bombay harbour, the Kalyan creek, which communicates through Bassein with the open ocean has always been used. Kalyan and Bassein have always been seaports of great importance.

[2] Much the same sort of controversy arose in the beginning among scholars regarding the exact family relationships of the Hittite speech.

§ 47. *(ii) Racial influences and racial admixture.*

Enough has been said in the preceding paragraphs to show that geographical and climatic influences exercise a very profound influence on human lives and human culture. Depending on these physical characteristics (though exactly how has not yet been clearly understood) each region develops a special race type[1] and a special culture. When races intermingle from whatever cause (political, economic or any other) the result is faithfully mirrored in their languages. The language of the people after the intermingling is a short of "resultant" of the constituent factors. The subtle psychological interactions between two or more races can be faithfully traced in their linguistic history. The resulting language has as basis the strongest language of the intermingling units. The strength of a language lies mainly in the *culture* it represents and is sometimes due to political causes as well. As a result of linguistic admixture the strongest language absorbs whatever it needs from the others and becomes richer. We can observe this at the present day in the evolution of the language of the United States of America. Though based on English it has been enriched by elements from every language of modern Europe. The people drawn from all the countries of Europe are being welded into a homogeneous whole and the language also is showing special characteristics of its own which mark it out as distinct from the English of England. There is a "vim" and a raciness about the American which is not found in the more stolid language of the mother country.

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[1] Modern Hamadan.

[2] See Sykes, *History of Persia*, Vol. I, Chap. I.

[3] Sykes, op. cit., Vol. I, p. 8.

American English is thus an example of a European language which in another continent developed under many and various influences. A contrary case, where a European language has remained practically isolated in another land, is that of Spanish in South America. Spanish in its European home has been subjected to the various influences of its neighbours, but in South America it has flourished in dignified isolation, except for the borrowing of a few words and phrases from the Indian languages around.

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[1] The modern American race, though of very mixed parentage, is conforming more and more in its physical features to the older Red Indian type.

When two races commingle the effect upon the resultant language is decidedly in the direction of greater simplicity, especially if the races speak languages of entirely different linguistic stocks. The natural tendency in a language to grow from the synthetic into the analytic is undoubtedly greatly hastened by such a commingling of races. This is very clearly seen in the history of the Modern Persian language. It had become practically completely analytic by the beginning of the Christian era. The reason for this change was undoubtedly the influence of the Semitic peoples with whom the Irano-Aryans came into contact quite early. And to-day the language is the most completely analytic of the I.-E. languages.

Another good example of a mixed language due to a mixing of races is the peculiar dialect of English, which is used extensively among the Pacific islands. This is known generally as "Pidgin English". It is really English spoken in the Chinese way. Negro English is another interesting example of such linguistic fusion

§ 48. (iii) *The mental outlook of a people.*

It is indeed a literal fact that language reflects the mind of a people. And the whole mental and moral history of a people can be read as much in its language as in its literature. It is in this connection that the Sceince of Semantics comes in most useful.[1] Each word has a history, which when properly read throws light upon many an obscure point of the cultural and mental history of a nation.

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[1] See below, Chap. VI.

In considering this part of our subject also we have to consider the influences of racial commingling. When two peoples mix they may either fuse together after a time, in which case the resulting language is vastly enriched. We have two excellent examples of this in English and Persian. Early English, when it emerges in the days of Edward III, is a happy fuison of "Saxon, and Norman, and Dane" and the resulting language is far more powerful and vigorous than its constituents.[1] Similarly Modern Irān when it emerges after the Islamic conquest of Īrāni, is a far richer language than the Pahlavi (her mother) owing to the rich stream of Arabic which meets it.

In India also we find from the various languages how the mental and cultural outlook of the people changed from age to age. Thus the alternating periods of "Sanskritising", which are found in all our vernaculars, are the precursors of religious or national revivals. These, deriving their inspiration from the life of the people have always culminated in a fine outburst of what might be called "Romanticism", which leaves the vernaculars richer than before.

§ 49. *(iv) Cultural influences, religion, art, literature, etc.*

All the three types of influences, which we have been considering so far, tend to change in language. These represent to a certain extent the disruptive tendencies in the life of languages. If all these influences worked unchecked they would in the course of a few generations change a language absolutely. This is what actually happens with uncultured races. A famine, or a scarcity of game, may lead some younger men of a primitive tribe to migrate elsewhere. There they get a different outlook upon life, they come into contact with men of a different tribe, and as a result if they return a few years later to their mother tribe they are unable to hold any communication with those they had left behind. Even in the same place the dialect would change too rapidly were it not for the folk-songs and the religious incantations of their "medicine men". Religion and literature (whether written or unwritten) from the most precious. heritage of humanity all the world over; and it is these that give stability to a language. And these same form the greatest bonds of union among peoples of utterly different races. It is a very significant fact that all literatures have begun with religious chants. We need instance only the Vedas in India and the Homeric Hymns in Greece. A great religious work is looked upon as sacred and consequently as a standard to which all other writing must conform. And in all ages and in all lands we find that it is a great religious book which starts a new age in literature. Classical Arabic dates from the *Quran*, Modern German beings with Luther's *Bible*, and Hindi Literature has been profoundly influenced by the *Rāmāyaṇa* of Tulsidas. Once such standard is set, it is only a great genius who can hope to change it in any manner, and this too he can do more effectively by appearing to conform to the standard thus already fixed. Of course, a language does change in the course of ages, still the ancient forms always retain a potent influence on its life and this is clearly seen by the periodical revival of the "classical" style which is observable in all great literatures.

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[1] See the very instructive chart of "the stream of the English language" given in the *Encyclopædia Britannica* (Cambridge University edition), art. "English Language".

Religion and literature, especially religious literature, form the most potent factors that bind human races together, and hence we see all great benefactors of humanity have dreamt of a "Universal Language"[1] and of a "Universal Religion".

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[1] See Appendix B for a discussion of this question.

CHAPTER V

THE INTELLECTUAL LAWS OF LANGUAGE:

ANALOGY AND KINDRED PHENOMENA.

§ 50. *The speaker is the most important consideration in language.*

The modern tendency in linguistic studies is to lay stress upon the psychological aspect of speech. In considering the changes in any type of language we have to consider them from two distinct aspects: (1) the physical and (2) the psychological. The former concerns itself mainly with the vocal organs and the physical production of sound. Such changes are mainly considered under *Phonetics*. Depending as they do on the physical laws governing the vibration of the vocal chords and the manipulation of the vocal organs, these phonetic changes in language can be formulated with a considerable degree of accuracy. Phonetic laws (as we shall see later on) have now almost attained the exactitude of the laws of physical sciences. The second, or psychological, aspect refers to the speaker, or, to put it more accurately, the *mind* of the speaker, which is at the back of every utterance. Whenever a man is uttering speech-sounds his mind is working, and it works during every moment of the utterance. And this activity of the mind has a special bearing upon the development of speech. Psychology has been fairly carefully studied in modern times and the rules of mental working have been carefully investigated. Thus the disturbing factors in the growth of human speech, which are due to the activity of the human mind, can be followed and investigated.

§ *51. The psychological factor is variable in its value.*

But though in any given individual case the psychological factor can be followed up and its full effect estimated, still no general rules have yet been laid down which would govern all cases that may occur. The reason is that no one can foresee the direction in which human mind would work under a given set of conditions. We can nearly always trace the underlying mental processes by which a particular word was produced or its meaning changed. But we cannot say that given the same circumstances another similar word would acquire the same form or undergo similar changes of meaning.[1]

The human mind is proverbially free to go where it listeth.[2] Hence all that can be done is, that *after this factor has done its work* the result can be investigated and the psychological reasons underlying a particular change or a special departure from the normal may be discovered and explained. What we cannot attain is the power of prophecy, of saying beforehand what the ultimate density of a particular form may be. In fact this psychological factor only helps us to understand why certain departures from the normal have occurred in every language. In considering the grammar of any language, as every schoolboy knows to his sorrow, the exceptions are very often quite as numerous as the normal examples of a rule. The psychological factor furnishes us with a very reasonable explanation of these. It is the factor which gives to the study of linguistics its special charm and makes it what it really is—a *human* science.

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[1] A new underground railway line was opened in London about forty years ago, and the name "Bakerloo Railway" was suggested for the line, because it ran between Baker Street and Waterloo Station. The name was accepted by all. A few months later another line was opened and a name built up exactly on the same principles as "Bakerloo" and equally well-sounding, was suggested for it, but was not taken up at all.

[2] Though used in a different context the verse of the *Bhagavad-Gītā* (vi. 34) is very apt for our purposes also:

चंचलं हि मनः कृष्ण प्रमाथि बलवद् दृढम् ।
तस्याहं निग्रहं मन्ये वायोरिव सुदुष्करम् ॥

§ 52. *The association of groups in the mind.*

It has been noted by all observers that the human mind thinks in groups. The very origin of concepts is a direct result of such an association of groups. We have already seen[1] that a concept results from a number of percepts being associated together in a group and the common factor being extracted from it. These groups are to be found in every mind and each individual mind possesses its own set of such associated groups. And thinking processes conducted in accordance with these groupings are the easiest and most fruitful. Hence we find in every system of "memory-training" stress is laid on the formation of such associated groups. And all educationists know how easy it is for a child to learn by associating new knowledge with groups already existing in its mind. The link between the unknown and the known is through these groups. So we find that in language also there exist such groups of associated sounds and words and meanings. And just as it happens in the case of children, one set of associated ideas may appeal to one person, but may not evoke any response from another mind. These association groups depend entirely on individual idiosyncracies and what is a natural grouping to one mind may seem to be a very far-fetched connection to another. This individual idiosyncracy is the chief reason why no rules can be laid down as to the direction along which this psychological factor would work in the case of a particular word or phrase. But recognising as we do that this factor exists, we can explain almost every individual example of such working and can satisfactorily trace it to its origin.

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[1] Chap. 1, § 7.

§ 53. *The acceptance of linguistic change by the community.*

Words or constructions formed in this manner, though they may be explained quite reasonably, are not necessarily accepted by the community. To be accepted and to be received into current speech each new formation should appeal to the peculiar characteristics of the people (very often to their sense of humour) and they must also come at what may be called "psychological moment". Many fine words and phrases have been thus accepted and received as "good and standard forms" in language, but others equally good have been rejected either because they failed to tickle the public fancy or because they came at the wrong moment. The great World War I. was a peculiar psychological period when sensibilities were particularly tense and when certain matters struck the public, and consequently a very large number of new words and phrases struck firm root in the languages of the fighting nations. One remarkable word of that period is *Blighty* the anglicised form of the Hindustani बिलायती which doubtless has been influenced by the slang, "*blighter*". "Gone west" is a phrase which had been used long before the War but it came into popular use only since 1914. Words like *Dora*, Anzac,[1] etc., have been coined on a principle which had been applied a couple of centuries earlier, but except the word *Cabal*,[1] which is known only to students of English History, words of such formation were practically unknown in English before the War.

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[1] By taking the initials of "Defence Of the Realm Act", "Australia and New Zealand Army Crops".

§ 54. *Analogy.*

It frequently happens that a certain group of words are associated together in the mind of the speaker. This association may be due to any reason—phonetic or other; and when another word seemingly related to that group comes along, the human mind desires to put the new word also in a form such as may make it recognisable as belonging to that group. A few examples will make the matter clear. In English, for example, we find the words *shall* and *should* and also *will* and *would*. And from analogy we get *could* from *can*. The forms *should* and *would* have the letter *l* quite correctly; but there is no reason whatever for *could* to have that letter. The only reason is the working of analogy; because *shall*, *will* and *can* are the three auxiliaries of mood and hence closely associated together in our minds. So what happen in the case of the first two must also happen in the case of the last, hence we have the uniform preterite forms, *should*, *would* and *could*.

Every language can furnish numbers of such instances where a real or fancied[2] resemblance to a group of words brings a new word into the group and causes a strange form which needs explanation. Thus from Sanskrit we may cite some examples.[1] We have in Sanskrit a very peculiar type of declension, that of feminine nouns ending in -इ and -उ (like मति and धेनु), where the singulars of the Dative, Ablative, Genitive and Locative cases show double forms. Of these forms one is of the type of the masculine nouns in -इ and -उ (like हरि and गुरु) and the other is of the type of the feminine nouns ending in -ई and -ऊ (like नदी and वधू). The reasons for these two forms are to be found clearly in analogy. For the masculine type there is the group of words ending in -इ and -उ, the vast majority of which are *masculine*, whereas for the feminine forms the association is with the group of words which are *feminine* in gender. Thus मति and धेनु would be felt to be feminine words inspite of the final short vowel.

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[1] This was the name of a notorious cabinet under Charles II and made up from the initials of Clifford, Arlington, Buckingham, Ashley and Lauderdale. Here, too, the influence of the Hebrew word *Kabalah* helped the acceptance of the word. Cf. also the ancient prophecy current in the days of Queen Elizabeth. "When *Hempe* is spun, England's done". The word *Hempe* was ingeniously made up from the initial letters of the Tudor sovereigns, Henry (VII and VIII), Edward VI, Mary I and Philip, and Elizabeth. After the accession of James I it was no longer England but Great Britain.

[2] When this happens it is called "false analogy". See below, § 56.

§ 55. *The extension of the dual number in Sanskrit.*

As another example we may cite the dual number in Sanskrit. As with the other languages of the I.-E. group the dual number was used in the earliest period of Sanskrit to denote pairs which always went together. Such were the duals of the limbs of the body (पादौ. कर्णौ) and of pairs of beings who are always associated together (पितरौ, मित्रावरुणौ, रामलक्ष्मणौ etc.), and we may also include here "pairs of opposites" (सुखदुःखे, जयाजयौ etc.). These duals may be styled "natural duals".[2] And in the earlier stages we do not get any other types of dual at all. But, by a sort of extension, we find the dual number in the case of *dvandva* compounds like काककूर्मौ, सिंहघ्रमालौ etc., where the association is not "natural" at all. This is a sort of extension of the province of the dual number owing to (1) the ease with which *dvandva* compounds could be formed and (2) the association of the ideas being altered from "natural duality" to mere "duality" whether "natural" or "accidental".

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[1] A good collection of examples is to be found in the article by V. S. Ghate on "The Influence of Analogy in Sanskrit" in the *Bhandarkar Commemoration Volume*, pp. 389 ff.

[2] Especially when *two* individual objects or persons were mentioned the dual had to be used. For this also is a "natural dual".

§ 56. *"False analogy"*.

Many of the earlier writers spoke of "false analogy"; but it is a misleading name, and it is just as well that modern writers generally agree to drop it. What is implied by the term is that the analogy is applied under the mistaken notion that a word belongs to a particular group, when as a matter of fact it does not. In a sense all analogical formations originate from such mistakes, and so they are all "false" to a greater or less degree.

§ 57. *The working of analogy.*

The working of analogy may be put down in the form of a mathematical ratio. And this can be best seen by observing the talk of children. Once two boys were discussing with great emphasis some matter, and one of them very emphatically denied it, saying, "No, it is *not*". The other immediately retorted, "It is sot".[1] Here, the process which was working in the mind of the second boy can be clearly expressed mathematically thus:

no : *not* : : *so* : *sot*.

Another case came under my observation some years ago. A child of four coined a new Gujarati word मरघन (hen) from the masculine मरघो (cock).[2] When asked to explain the new word, he gave the correct explanation, that just as सिंह gives सिंहण, धोबी gives धोबण, so must मरघो give मरघन.

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[1] I am indebted for this story to my teacher, the late Dr. Peter Giles, Master of Emmanuel College, Cambridge.

[2] The correct feminine is मरघीँ

Another case which also illustrates clearly this working of analogy may be quoted from the artificial world-language, Esperanto. Dr. Zamenhof (the inventor of this language) took up the German word *Fräulein*, and, changing it to *fraulino*, adopted it into Esperanto to indicate a young (unmarried) girl. The *-lino* here is originally the German diminutive suffix *-lein*.[1] But in Esperanto *-ino* is the feminine suffix, hence it was easy for Zamenhof to coin a new word *fraulo* to indicate "a young (unmarried) man", "a bachelor".

§ *58. The effects of analogy.*

The principle of analogy plays an extremely important part in the development of languages. Its main effect is seen in a tendency to level down irregularities in grammar and also differences in word-formation. This is seen especially in the case of languages which have come under the influence of racial admixture. Naturally foreigners trying to speak a language would take up the formation which is numerically the largest, and would tend to put all others at the same level by analogy. For instance, the plurals of nouns in English, except in a very few cases, have been regularised and are made by the suffix *-s*.[2] Contrasted with these are the various methods of plural-building in German. Both English and German were at the same stage of development about a thousand year ago, but English has come under foreign influences to a far greater extent than German and hence the levelling tendencies of analogy have had greater scope to work in English.

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[1] Fraulein is "little woman", hence "an unmarried girl", "a Miss".

[2] Of course the rules about plurals ending in *-es*, *-ves* etc., are purely phonetic. The only other plural suffix found in English to-day is *-en* and that too is going; *kine* and *een* (persisting in Scotch) have been replaced by *cows* and *eyes*. There is no reason why *oxen* may not be replaced soon by *oxes*. *Children* will probably persist longer because of its double suffix.

§ 59. *Contamination*:[1] (*i*) *Verbal.*

Another very interesting phenomenon in language, seen especially in the field of syntax, is what is known as *contamination*. It occurs when two ideas or constructions come up in the mind of the speaker simultaneously, or following each other so closely that the two get fused into one, each "contaminating" the other, sometimes it is expressed in strange-sounding words known as "portmanteau-words",[2] where two words fuse together to form one. Thus, *cameleopard* is an animal tall and long-necked like a camel and spotted like a leopard; *galumphing* is galloping and triumphing. In Cambridge students often take *brunch*, breakfast and lunch rolled into one. A very good instance of this process was the H. M. S. *Zubian* during World War I. There were two British cruisers the *Zulu* and the *Nubian* and they were both badly damaged. The undamaged halves of the two were put together and the new vessel was called by the combined name of *Zubian*, which puzzled the Germans not a little !

§ 60. *Malapropisms and Spoonerisms.*

Malapropisms, which are known to all readers of R. B. Sheridan, are also contaminations of a sort. Here two words of nearly similar sound are confused together and the confusion is mainly in the meaning. "The *allegory* on the Nile" is well known. In my own observation I have come across "he *standards* (tenders) his apology" and "he is a *stamina* (stigma) to the family". *Spoonerisms* may be called "phonetic contaminations". They are a species of *lapsus linguae*. Where two sounds in two different words are transposed we get a funny combination. These are by no means usual, and beyond causing laugh they do not influence the language. Their name is due to Dr. Spooner of Oxford, who was prone to such lapses.[1] One of the finest of his lapses was when he was asked by a porter at the station about his luggage and he said he had only "two *rags* and a *bug*" (two bags and a rug). Another time he is said to have reprimanded a student by telling him that he had "*tasted* a whole *worm*" (wasted a whole term). When such transposition occurs *within* the *word* it is called *metathesis* and this change is often accepted as such in language.

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[1] For a detailed treatment of this, see an essay by myself on "Contamination in Language" in the *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III (Orientalia), 2, pp. 603 ff.

[2] This name is found in Lewis Carrol's fascinating *Through the Looking-Glass and what Alice found there.* It is Humpty-Dumpty who expounds their structure.

§ 61. (ii) *Syntactical contamination.*

As already mentioned, contamination is found mainly in the domain of syntax. It is mainly due to the fact that thought often moves faster than speech. Here before an idea embodied in a sentence is fully expressed, another idea arises and the two resulting sentences get fused together. These are sometimes called "pregnant constructions" by grammarians. A good instance of this is इन्द्रश्च सोमं पिबतं बृहस्पते. where a nominative and a vocative are yoked together and consequently the verb is in the dual. It is clearly a confounding of two sentences इन्द्रः सोमं पिब and त्वं च बृहस्पते सोमं पिब. Another example is दाक्पावं च

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[1] **Most of the examples fathered on him are apocryphal. There was an exceedingly funny article on "Spoonerisms" many years ago in the Strand Magazine.**

[illegible], where one adjective of the noun पात्रम् is compounded with it and the other is given separately.[1] Among English writers Shakespeare and Milton abound in such sentences. One of the finest examples is from Milton:

> Adam the goodliest man of men since born
> His sons; the fairest of her daughters, Eve.[2]

§ 62. *The human mind disregards rules of grammar.*

The main point sought to be emphasised in this chapter may be stated in one sentence: the human mind disregards rules of grammar. The mind is mobile and restless and none can predict how a particular human being would respond to a particular set of circumstances. This is a very important factor in language growth. What grammar does, and should do, is to systematise and classify *the facts* of a particular language at a particular period. It is not the business of grammar to dogmatise or to lay down rules of speech. Every language has numerous dialects; what may not be "correct" in the standard or "learned" speech may be quite acceptable in a "vulgar" dialect. And what is "vulgar" to-day may become perfectly "correct" to-morrow. As an example we may note that the *h* in *humble* was "silent" not very long ago, but it is not so now;[3] and I would not be surprised if in the near future the word *honor* also has its *h* clearly pronounced. Words and forms and phrases which are not recognised by our grammatical text-books may find a place in standard grammars of the future if only a great and popular writer once uses them.[1] In short there is nothing "ungrammatical" in language, only some forms and constructions are "unrecognised" till some great person uses them. Hence, too, the need of issuing authoritative grammars of various languages from time to time. France and Germany have been doing this once in about ten years and it would be a great service to learning if all important languages were treated similarly.

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[1] Such constructions are the rule in German, e.g., *Eisen- und Strassenbahnen* (lit., "rail- and tram-ways".)

[2] *Paradise Lost*, iv. 324-25.

[3] Some think it was due to Uriah Heep's "umbleness" that good and respectable people began to stress the *h*.

[1] महाजनो येन गतः स पन्थाः ।

CHAPTER VI

SEMANTICS OR THE SCIENCE OF MEANING[1]

§ 63. *Semantics, a comparatively new branch of linguistic science*

The Science of Meaning or Semantics is a comparatively recent development of linguistics. People have at all times recognised the fact that meanings of words change in course of time and all writers on linguistic science have noted this, but it is only recently that this branch of linguistics has been treated systematically and scientifically. The first important work on the subject was that of Bréal[2] and since then several scholars of repute have given time and thought to the subject. Except for a few stray articles not much work on the subject has been done for oriental languages.[3]

§ 64. *Change of meaning in borrowed words*

When words are borrowed bodily from one language into another we get a change of meaning in most cases. The significance in the original language is bound to undergo some change in the new environment in which the word finds itself. Such changes often come on quite gradually. Thus, if the name of a plant or an animal has been borrowed from one land into another, it will in course of time come to mean a different plant or animal altogether. The Persian word *shīr* (lion) in Urdu and other Indian languages comes to mean "tiger".[1] The word *daryā* which in Persian means "river"[2] retains that sense in Urdu, but in Gujarati the word means "the sea". There have been a large number of words borrowed in the vernaculars of India from English and other European languages and some of them have undergone really strange transformations of meaning. The word "grapeshot", fairly common in the days of the East India Company, has come into Gujarati as गरभकाट and is now used as slang for "a tall story".[3] The word गिरमिटया is a corruption from "agreement",[4] and is now used exclusively for "an indentured labourer" (lit., one who has entered into an agreement). Another word is the Gujarati word बासकुट used for a "lady's blouse", though its origin is "waistcoat". Another very interesting example is the word कलाक which means "hour" in Gujarati and is obviously from "clock" —the instrument which shows the hour.[5]

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[1] I am greatly indebted to the excellent treatment of this subject by T. G. Tucker in his *Introduction to the Natural History of Language* (pp. 373 to 396). I may say here that I have striven to give examples from Indian languages and most of these are naturally from my own mother-tongue Gujarati.

[2] *Essai de Sémantique* (1897).

[3] Among the earliest is that of Mr. Hemantakumar Sarkar on "The Intellectual Laws of Language and Bengali Semantics" in the *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III. 1. It is based on Bréal's book as regards classification and arrangement.

§ 65. *Change of meaning between cognate languages*

When we compare words of different languages which are phonetically connected, we are struck forcibly by the differences of meaning as we pass from one language to another. Thus Sanskrit धूम: is the same as Greek

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[1] It is pronounced *sher* in India.

[2] *Cf. Amu Daryā* and *Sīr Daryā*. But in Old Pers. it means "Sea".

[3] A modernised version of "drawing the long bow".

[4] Note the dropping of the initial *a*- due to the stress accents following.

[5] Cf. Hindi (and Bengali) घड़ी and Skt. घटिका.

thumós, but the Greek word means "soul" or "spirit". So also आत्मा is cognate with Greek *atmós* which means "smoke" or "vapour".[1] An extremely interesting list of words could be made of words derived from Sanskrit (or from Persian and Arabic) which have passed into the Indian Vernaculars but have meanings different from the original and also differing from each other. Thus Sanskrit वाटिका gives Gujarati वाडी, which is "garden", but in Bengali it means "house" or "home". The masculine form वाडो in Hindu-Gujarati means "a courtyard";[2] whereas in Marathi it means either that or a particular "locality" in town or city. Sanskrit गृहम् is घर in Hindi, Marathi and Gujarati and means "house", "home" or "building",[3] but in Bengali the word means "room". In Gujarati बेटा (son, child) is a term of endearment, whereas it is a term of reproach in Bengali; आदर is "affection" in Bengali, but "respect" in Gujarati and राग means "anger" in Bengali and Marathi, while its original meaning in Sanskrit is "love". The change of meaning is very markedly seen in names of trees and animals. This is quite natural, for as tribes migrate from one land to another they give to the plants and animals they meet the old and more familiar names. We have already seen the case of *shīr* (lion) being applied to the "tiger" in India. Sanskrit

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[1] Hence the English *atmo-sphere*.

[2] In Parsi-Gujarati the feminine is used more or less in the sense of "a club", originally a small garden-house in the suburbs where people used to assemble for passing a pleasant evening. The masculine form (वाडो) in Parsi-Gujarati means "lavatory".

[3] There is a Gujarati idiom (found chiefly among Parsis) घर करवु (lit., to make a home) in the sense of "to marry". In this घर is almost equivalent to "wife"; cf. गृहिणी गृहमुच्यते. In Hindi "wife" is often called घरवाली (lit., the mistress of the home).

दारु (wood), Greek *drûs* (*oak*)[1] and *tree* are cognate but they mean different things. In the case of colours, too, such changes are to be noted, for colours can easily merge one into the other. Thus Gujarati लीलो (green) is from Sanskrit नील (blue). Similarly with tastes there is liability of confusion; Sanskrit कटु means "sharp" or "hot" (as the taste of pepper) and तिक्त is "bitter" (as of quinine), but in Gujarati कडवुं (Marathi कडु means "bitter" and तीखुं means "sharp" or "hot".

§ 66. *Changes of meaning due to difference of environment*

So far we have been considering the change of meaning when words pass from one language to another. But within the same language, and often at the same period, one word may bear a variety of senses. Thus the word *bar* in English has very different significations to various people. To the magistrate and judge it brings up the idea of the prisoner at the *bar;* and to the lawyer it calls up reminiscences of his call to the *bar;* to the Lord Mayor of London it would usually signify the Temple-*Bar*, the ancient limit of his jurisdiction, to the habitual toper it is the *bar* of the public-houses, to an M. P. it is the *bar* of the House of Commons, while to a sailorman it is the *bar* he crosses at high tide. Similarly *Congress* to an American and to an Indian means very different things. Different professions have each their 'slang" or stock of trade-words and the same word may be used by different people ,to mean different things. In Gujarati the word कलम when used at school means "pen", but in a garden

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[1] The tree is sacred to Zeus. Among the Hindus also there is the देवदारु, the Himalayan pine, which is sacred to Siva; cf. अमुं पुरः पश्यसि देवदारुं पुत्रीकृतोऽसौ वृषभध्वजेन (*Raghuvaṃśa*, ii, 36).

it means "grafting".[1] Sometimes there is a slight difference in the form of the word corresponding to the difference of meaning, these are called *doublets*: e.g., Gujarati पान (betel-leaf) and पानां (playing-cards)[2] both from Sanskrit पर्णं ; पतुं (sheet of metal) and पातुं [3] (leaf) and पत्र (letter), all from Sanskrit पत्रम्.

§ 67. *Classification of semantic change*

It is obvious that in meaning-change also the principal factor is the human mind. Hence we cannot predict the direction in which the meaning of a word may change under a given set of circumstances. In other words we cannot lay down any definite "laws of semantics". But *after* the change has occurred we can always explain it; and we can classify the various types of change of meaning and also tabulate the underlying reasons. All semantic changes can be classified under three heads: (i) *expansion* of meaning, (ii) *contraction* of meaning and (iii) *transference* of meaning.

§ 68 (*i*) *Expansion of meaning*

A general word is used in a special sense more often than a special word in a general sense. Hence examples of "contraction of meaning" are far more numerous than those of "expansion of meaning". The Hindi word परसु (day before yesterday or day after to-morrow) can be traced to Sanskrit परश्वः which means "day after to-morrow". From the future it has extended to past time as well, and in ordinary talk it means any time, past or future, without referring to any fixed point at all. Another instance is the

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[1] Obviously because the twig to be grafted is cut obliquely like a reed-pen.

[2] This is a plural form.

[3] Spelt usually पांदडुं ; पातुं the dialect pronunciation.

Anglo-Indian word *boy* (in the sense of " man-servant "), which is applied to all male servants (except the cook) irrespective of age. The Parsis of Bombay usually speak of all Hindus as वाणिया (Sanskrit वणिक्), which is a special caste. Another example is a word used in some Parsi circles only. It is a modern and colloquial word बिस्मार्की. It is coined from the name of Bismark, the famous German statesman. The original meaning intended was ".diplomacy ", and the reason for the coining of this word was the famous telegram of Bismark that precipitated the Franco-Prussian war of 1870. From that the meaning has expanded to include "mischief" of every sort, even including that of children.[1] Other examples of expansion of meaning are to be found in proper nouns being used as names of objects, e.g., *Macintosh*, *Cognac*, etc., or the word गंगा used in some Indian Vernaculars (especially in Marathi)[2] in the sense of "river" in general.

§ 69. (*ii*) *Contraction of meaning*

Examples of this type are naturally very numerous. A word having a general wide significance comes to be restricted to a certain special aspect, while another word does duty for the remaining part (or the whole) of the original signification. Thus the English word *tide* originally means "time" and is cognate with the German *Zeit;* but it is now restricted only to special times of the ebb and flow of the sea. The word *time* has taken its place. But in the proverb "time and tide wait for no man" and in words like

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[1] This word was very familiar to me in my childhood and it is still heard occasionally. It is strictly restricted to a narrow circle. But I think it deserves better recognition.

[2] In Gujarati there is a well-known line of Narasimha Mehta where the word is used in this sense: गोळीतो गंगा थई रे पळे उजळा थया छे केश (the water-jar serves instead of the river for bathing, and the hair on the body has grown grey), referring to the declining strength of old age.

Whitsuntide the old sense is retained. Similarly the word *meat* in English originally meant any sort of "food", but it sense is now restricted to "flesh-food" only. But the old sense is found in the word *sweetmeat* and in the phrase "meat and drink". Some other interesting examples may be quoted. The word ખુર્દો in Gujarati means "small change"; it is from the Persian word *khurdeh* "small", which is used to indicate small bits of all sorts of things, as in the phrase *Khurdeh Avestā*, the name given to a collection of hymns and daily prayers of a miscellaneous character. But in the phrase ખુર્દો કરવો the original sense is preserved for it means "to break to pieces". The history of the word *mṛga* in Indo-Iranian is a fine example. Originally it means "animal" generally. This sense is preserved in Sanskrit मृगेन्द्र (lion, the king of animals). Later on in Sanskrit the word means a special animal, "deer".[1] In the Iranian languages the word *murgh* (Av. *maregha*) is used for a "bird" in general,[2] as in the name of the fabulous bird *Sīmurgh* of the *Shāhnāmer*, who took care of the infant Zāl.[3] In the Indian Vernaculars this *Irānī* word *murgh* gives the familiar मुरगा, मुरगी (cock, hen).[4]

The word *paper* in the phrases "daily paper" or "government paper" clearly shows narrowing. So also the words *wire* (તાર in India), *current* (when used for electricity) and hundreds of words in daily use show specialised usages and hence a narrowing of sense. Even verbs denoting common actions become restricted, e.g., *to act to drink*, etc.

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[1] The English word *deer* has had exactly the same history. Originally it also meant "animal" generally, like its German cognate *Tier*. In its original sense it is used in the Bible, and in the phrase "mice and rats and such small deer" (*King Lear*, Act iii, sc. 4).

[2] Apparently a case of "transference of meaning".

[3] Also in the Gujarati word (borrowed from Persian શાહમૃગ (the royal bird, ostrich).

[4] Exactly as the English *fowl* (German *Vogel*) originally meaning bird', now means cock or hen.

§ 70. (iii) *Transference of meaning*

Owing to association of ideas it often happens that a secondary sense attaches itself (originally unconsciously) to a word and gradually that secondary sense comes to be itself regarded as primary. Thus there is a transfer of meaning from one sense to another. The word गंवार of Hindi (गमार in Gujarati) means originally " villager ". But in contrast to townspeople (who always pride themselves on their education and good manners) they are regarded as poor in intellect, hence in course of time the word came to mean " simpleton " or " idiot". Exactly similar is the history of Parsi-Gujarati देहकान',[1] which now means " simpleton ". So also *heathen* was " one who lived on the heath", hence, " he who is not aware of the teachings of Christianity ". The Zoroastrians use the word दर्वंद in the sense of one who is not of their faith. Originally the Avesta word *drvant* means " a sinner ".[2] The Parsi-Gujarati word रवान now means " a dead body ", but the Avesta *urvan*, from which it has been derived, means the exact opposite—" the soul ". The transference took place probably owing to a sharp contrast, the soul departs and the corpse[3] remains. Another Parsi-Gujarati word is the word भसु' which is specially used to denote the Parsi Tower of Silence.[4] The word is a corruption of the Persian *bihisht*

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[1] From Iranian *dihkān*, a landed proprietor, a country-squire.

[2] The world means originally "one who follows Untruth (*druj*)".

[3] *Corpse* also shows a similar transference from a living body (Lat. *corpus*) to a dead one.

[4] It is used also by Hindus, especially round Surat and Navsari, which are strong centres of the Parsis. In Surat there is the largest structure of this kind in India and there is a plan of it hung up in the waiting-room there, which is labelled पारसी सोबोतु' भसु'.

"the heaven-world"[1] to which the soul goes after death. But by a strange transference it is used for the place to which the dead body of a Parsi is consigned. Then by an extension of meaning the word is used for the place where the dead of any community are disposed of. And so the lower classes of Gujarat use भस्ते गया (gone to the भस्ता) as a term of abuse.

§ 71. *Ahura and Daeva-words in Avesta*

Te Avesta language shows a very remarkable peculiarity. It possesses two entirely distinct sets of words, the one applicable to divine beings and to the creation of the Good-Spirit and the other to the evil beings and to the creation of the Evil-Spirit. The great stress laid in Zoroastrian doctrine on the utter contrast between Good and Evil has given rise to this peculiar feature. The series includes names of all limbs of the body as well as numerous common actions.[2]

Every lanuage shows such contrasts between what may be called "polite" and "vulgar" words, e.g., German *Mund* (mouth) and *Maul* (muzzle, used only of animals), *essen* and *fressen* (both meaning "to eat" but the latter used only in a "bad" sense); English *breed* and *spawn*, *nail* and *claw*, etc. But nowhere except among the Zoroastrians is the contrast shown in so thorough-going a manner. Even to-day the Parsis use the double series, e.g., खावुं or जमवुं (to eat) but ओभरवुं (lit., to fill up), पीवुं (to drink) but ढोचवुं (to guzzle)[3], सुवुं (to sleep) but घोटावुं (to be huddled up)[4] and so on.

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[1] From Av. *vahista* (वहिश्ट) 'best".

[2] See the article on this subject by L. J. Frachtenberg in the *Spiegel Memorial Volume* (pp. 269-289).

[3] The Parsi phrase ते खुब ढोंचे छे is much stronger than ते पीये छे when used for a drunkard.

[4] I am doubtful of the true sense.

§ 72. *Reasons for change of meaning*

It is extremely interesting to consider the various reasons that lead to these changes of meaning. As already pointed out, we cannot lay down any definite rules for change of meaning; but *after* the change has occurred we can always explain the reasons for them. They are psychological reasons and very often several reasons may be found mixed up. The root principle in all is association of ideas. The reasons can be enumerated but it should be stated at the very outset that the enumeration is not exhaustive. Still the main reasons may be given as follows:

(*a*) Figurative speech and use of metaphor resulting from an effort at clearness of expression.

(*b*) Change of environment, which may be (*i*) geographical or (*ii*) social or (*iii*) material.

(*c*) Politeness in addressing people.

(*d*) Euphemism.

(*e*) Irony.

(*f*) Emotional emphasis.

(*g*) Prevailing use of one type out of a class.

(*h*) Laxity in the use of words due to ignorance or misunderstanding.

(*i*) Indefiniteness in the meaning of the words themselves.

(*j*) Differences between individual conceptions of . word.

(*k*) Predominance of one element in the word.

(*l*) Unconscious inclusion of a secondary meaning.[1]

These may be considered separately in some detail.

§ 73. *Figurative speech and the use of metaphor*

The desire of the speaker generally is to make his mear ing perfectly clear, and to do that he has often to make us of comparisons. This is especially the case when abstract ideas are to be expressed. We speak of "a *weighty* argument", or of "a *hazy* notion". Every language has got a large number of words which have originated in this way metaphorically. We *ponder* over a matter, when we *weigh* it in our minds. So also we talk of "*sweet* words" and of "a *beaming* face". In Gujarati we say of a worthless person that "he lacks salt" (एनामां मीठुं नथी).[1] Not only abstract terms but even concrete objects may be described figuratively. Thus we have "the *teeth* of a saw" and "the *eyes* of a potato". Comparisons are also used to describe prominent qualities in human beings;—a woman may be a *vixen*, or in Gujarati she may be called a विछण (female scorpion). So also we have the epithet वृकोदर (wolf-bellied) applied to the voracious and savage Bhīma and a strong person is often called in Persian *pīl-tan* (elephant-bodied). Even proper names may have their connotation extended as in "a *Daniel* come to judgment" or in phrases like *Rustam i ān zamān* (a modern Rustam), or "the *Shakespeare of Bengal*". The chief idea at the root of all such metaphorical speech is to explain the unfamiliar through the familiar.

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[1] The enumeration of reasons has been adapted from Tucker book.

§ 74. *Change in environment*: (i) *Geographical*

We have already seen some instances of this when considering change in the meaning of borrowed words and of cognate words in different languages.[2] A few more examples may be added. The word उष्ट्र in the Veda, at any rate in the earliest hymns, means a "buffalo", or rather "bison", owing to its colour.[3] It was later transferred to the camel. This would be an indication that the people migrated from the land where the bison was found to the land of the camel. In modern times we see the varied use of word *corn*, which in England is a general term, while in America the word is used for " maize ", which is the staple diet of the aborigines. The names of trees and animals which are cognate in the various branches of the Indo-European languages show remarkable changes of meaning as the tribes migrated from place to place. Thus English *beech* and Latin *fagus* are cognate and identical in meaning but the corresponding Greek *phāgós* means " oak " and Kurdish *būz* means " elm ".[1]

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[1] The idiom is from Persian.

[2] § § 64 and 65 above.

[3] The name originally means "burnt", hence "brown".

§ 75. *Change in environment*: (*ii*) *Social*

We have already seen how the same word may have different meanings where different trades are concerned.[2] Even words one might not have expected to change in meaning, like *father, mother, brother and sister*—may also change. The Catholics use all these words to indicate different orders of their religion. The word *Pope* was originally *papa* (father). In Greek *phrátēr* (same as Sanskrit भ्राता is used only for a clan-brother whereas the true blood-brother is *adelphós* (lit., सगर्भः or सहोदरः).[3] In India the word भैया or भाई is used in both these senses and even more loosely. Men of the same village, or district, or even province, may be called भाई or भैया. In fact some people are so accustomed to this word that they would call any human being, even an utter stranger, भैया.[4] This is a characteristic word in the mouths of the people of Behar and so in the Western Provinces these Beharis are universally called भैया (or भैयाजी). They often call themselves *Purabiās* (or Easterners) and popular etymology has even corrupted that name to पुरभैया.[1] The word श्वशुर (father-in-law) and श्वश्रू (mother-in-law) originally applied only to the *husband's* father and mother and that implies that the family organisation was patriarchal and that the newly-married bride had to find special names for the members of her husband's family who adopted her. In the *Ṛg-Veda* there are two passages in which the word श्वशुर (and श्वश्रू) are used from the man's point of view, *i.e.*, meaning the wife's father and mother.[2] In Greek the corresponding words *hekurós* and *hekuré* were used similarly for the husband's parents. The corresponding word for the *wife's* father was *pentherós*. Lithuanian and Albanian also show similar distinctions in these words. The husband is in most languages of India called वर though he is seldom *chosen* by the bride.[3]

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[1] Schrader, *Reallexikon* (2nd ed.), I, p. 170.

[2] § 06 above.

[3] In English the double sense of *brother* is indicated in the two plurals *brothers* and *brethren*.

[4] Cf. the vulgar use of *man* by the Anglo-Indians in India. Anybody and everybody can be called "man". I have actually heard Anglo-Indian girls addressing each other by this word.

§ 76. *Change in environment*: (*iii*) *material*

With the growth of material civilization new changes come over words. Things were named after the material out of which they were made, and even after the latter changed entirely the old name continued. Thus *paper* was originally made out of *papyrus* pith and still bears the name though it is no longer made thus. *Pen* was originally a feather (Latin *pinna*, quill). But we have now steel-pens, gold-pens and even fountain-pens. In Bombay we call a steel-pen इस्टील, from the material of which it is made, but we use पेन also. The queerest use among us of this latter word is in स्लेट-पेन, of which the fine soft variety is called मेंदा-पेन.[1] *Volume* was originally a roll of paper, and even to-day there is a legal dignitary in England called the *Master of Rolls*. ग्रन्थ was originally a set of palm-leaves tied up together (√ग्रथ्, to bind). A steamship even now is said *to sail*, and in Calcutta every office has *bearers*[2] who do not carry anything.

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[1] This case of भैया is strangely paralleled by the Chinese name for British soldiers, *Sczai*, from their constant use of the phrase "Says I" (*The Problem of Grammar* by Prof. Allan Mawer, English Association Pamphlet No. 56, p. 11).

[2] These are x. 28.1 and x. 84.3 In the first the speaker is said to be Indra.

[3] From वृ, to choose, Cf. स्वयंवर.

§ 77. *Politeness in addressing people*

Politeness is a specially desirable quality to cultivate and most of the Indo-European languages have developed special forms of address, *i.e.*, of the pronoun of the second person. English has entirely discarded the singular number of the second personal pronoun, the idea being to use the " plural of respect ". But other languages of Europe and of India still preserve the singular number of the second person for intimate friends and near relations to imply affection. The use of the singular in addressing God indicates the भक्तवात्सल्य (affection of the devotee) of the worshipper. The plural pronoun in some of the languages shows a double form, one ordinary and one of respect. The latter is either a different pronoun, as the German *Sie* (originally the pronoun of the 3rd person feminine)[3] or the Italian *Ella* (originally the 3rd person feminine)[1]. In Indian languages we have आप as the polite form, which is from Sanskrit आत्मन् (self). In Sanskrit the polite form of the pronoun is भवत् (present participle of भू-भव्) used in the plural.[2] The literal meaning is somewhat like " your presence ", like the Urdu *huzūr*. Urdu uses also phrases like *gharīb-parwar* (protector of the poor), *bande-nawāz* (enricher of the slave), etc. Among Indian languages politeness in addressing is carried to the greatest lengths in Urdu. A man talks of his house as *gharīb-khānā* (poor house) and of that of the person addressed as *daulat-khānā* (rich mansion). So also the speaker speaks of himself as *arz-kartā* (making a request) but the person addressed "is commanding" (*farmāte hãẽ*). In Persian the pronoun of the second person plural is *shumā* (Sanskrit युष्मा -) and that is generally used, but the speaker talks of himself always as *bandeh* (servant). Also when speaking of a third person, when respect is to be indicated, the third person plural pronoun *īshān* (now pronounced *īshūn*) is used.[3] But the extreme of polite language is said to be reached by the Japanese. They are said to have an entirely different language for use in polite circles as distinct from the vulgar language.[4] " A number of objects and actions receive peculiar designations in the mouths of members of the Imperial Family and of those privileged to address them. Ordinary mortals can have no use for this exalted phraseology ".[5] Thus walking in ordinary language is *aruku* but the court expression is *o hiroi* (lit., honourably picking up), " blood " is *chi* ordinarily but *ase* (lit., perspiration)[1] for the higher people. The use of these words, needing in many cases a different syntax, is very complex, and it takes foreigners a very long time to master these intricacies of the honorifics.

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[1] मेंदा is fine white flour (Hin. मयदा). The name is due to the fine powder that is left on the slate while writing.

[2] These were originally the palanquin-bearers, who also used to run errands and do other work. Exactly similar is the word हमाल (an Arabic word meaning "bearer") used for the menial servants in Bombay offices. Sanskrit भृत्य also seems to have been originally a "bearer".

[3] This second personal pronoun is distinguished by the initial letter being capital; see Wright, *Historical German Grammar*, I, §§ 43 and 441.

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[1] This peculiarity is due to the fact that in old days the phrase *Vos signoria* (your Lordship) was used for polite address. This being feminine, the feminine *Ella* was substituted later. Note that here too the initial is capital. The reason for German *Sie* is exactly similar.

[2] The verb with this is also in the 3rd person plural.

[3] Of course, the verb used with this is in the plural.

[4] The lower classes in India also do not use polite forms among themselves, and often not even when talking to their betters.

[5] Chamberlain, *Handbook of Colloquial Japanese* (4th ed.), p. 241. See also his very interesting chapter on "Honorifics" (pp. 254-259).

§ 78. *Euphemistic language*

This may be due to various causes. There may be the desire to avoid using a bad word which might hurt another's feelings. The English word *silly* originally means "blessed"[2]; a *plain* woman is really ugly. In India we call the scavenger मेहतर (Sanskrit महत्तर. the greater).[3] and cooks in North India are called महाराज (great king) and some servants in Bengal are styled ठाकुर (lord). Sometimes in Benares we hear a person called शीतलाकी सवारी (the steed of Śītalā), a mild way of saying " donkey ". Another reason for euphemistic phrases is to prepare the hearer for something unpleasant. Hence there are many and varied ways of speaking about death. In Sanskrit we have phrases like पंचत्वं गतः (reduced to the five elements) or कथाशेषतां गतः (became only a memory).[4] Parsis use पुलगुजार (crossed the bridge)[5] or फुलवाडीमां जवुं (to go to the garden of flowers). The Avesta also speaks of the dead as *irista* (departed).[6] In Gujarati the phrase स्नानना समाचार (the news for bathing) is used to mean "bad news " (usually that of death), because the Hindus need a purificatory bath after hearing it. Parsis use the word खबर (news) in the sense of " bad news ", specially news of death. Sometimes a useful substance is given a good name in spite of some unpleasant qualities, e.g., salt in Gujarati is called मीठुं (sweet). There is superstition underlying this practice. And indeed superstition accounts for a lot of words. Wives in some communities of India are forbidden to use the names of their husbands or even the word "husband ". So they use in Gujarati ए (he or the more polite plural, एओ. Sometimes we hear the phrase कीकाना बापा (the father of the boy). Husbands too use the pronoun ए or कीकानी मा (the mother of the boy). Often any disease or misfortune a person suffers is described as being suffered by his enemy—दुश्मनने ताप आवेछे (lit., his enemy is suffering from fever), and often the speaker takes it upon herself [1] एनो मा (or बेन) बिमार छे [his mother (or sister) is ill]. The various names given to children in India are often based on superstition. When several sons have died. the succeeding ones are given " bad " names, so that the demons may pass him over as worthless. Such names are उकर (dung-heap), फकीर (beggar), कचरो (sweepings), घेलो (mad), तीनकोडी (worth three shells). When a man is "blessed" with a series of girls, in communities where girls are not wanted, we get some exceedingly queer names, such as बस (stop!) or भारनाकाली (no more, O Kali!). There is a very queer phrase in Parsi-Gujarati, which was heard very often a couple of generations ago but is now getting out of use, which had its origin in superstition. When a woman was prosperous and happy and another came and complained to her of ill-usage and misfortune, the happy one thought that she might catch the evil herself unless the other was satisfied. So the old Parsi women used to say to such envious persons लेतीजानो पाणी चाव (apply a poultice of *letijā* herbs). Here the word लेतीजा means literally " take it away ", i.e., remove your envious eye and, if you like, take away some of *our* evil with it. It is owing to superstition, too, that the dread disease small-pox is called शीतला (the cool-one) or माता (mother) all over India.

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[1] A very interesting reflection of the warrior spirit of Japan.

[2] Cf. Ger. *selig*.

[3] The Prince of Chitral is called the *Mehtar*.

[4] Lit., "a tale".

[5] Referring to the *Cinvat*-bridge where the good and the wicked are separated after death.

[6] The use of the word *ravān* for "corpse" may be due to the same reason, viz., not using an unpleasant word.

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[1] These words and phrases are mostly used by women.

§ 79. *Irony.*

Irony is responsible for the word किंकर (servant) in Sanskrit, for it seems to mean "what could he do?"[1] Parsis have a peculiar sense of humour and the Parsi-Gujarati dialect shows a good many examples of ironical words. One or two examples may suffice. A foolish person is called दोढचतुर or "too clever by half", literally "one-and-a-half clever"; or he may be called "an ocean of wisdom" (अक्कलनो समुदर). Under this head may also be mentioned paraphrases of names which may not be mentioned in polite conversation. तस्कर (thief) is literally "the door of that"[2]—something unmentionable. So also the English words *unmentionables* for "trousers" and *hyphenated* for "damned". In the Victorian days prudery went to such an extent that no part of the body below the neck could be mentioned in polite conversation. And very funny paraphrases were made for the stomach or belly. I have come across *tummy*,[3] *little Mary*, *bread-basket*, and even *front of the back*. In Sanskrit erotic poetry (as also in other languages) many erotic words are rendered by clever paraphrases.[4] In Parsi-Gujarati the nose is often called फुलसुंघणु (the flower-smeller) especially when used metaphorically to mean " a sense of shame ". A drink

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[1] It might be "one who does anything (or nothing)".

[2] This is the way the word has been explained and it sounds quite plausible.

[3] A child's word for *stomach*.

[4] E.g., दैत्यगुरुः in the *Śṛṅgāratilaka* ascribed to Kālidāsa.

(especially a peg) is called **छाटोपाणि** (a drop of water)[1] or **दे आंगल** (two fingers), indicating the measure of the liquor in the glass. One such paraphrase used in ordinary Sanskrit is the word **द्विरेफ** (bee) which stands for **भ्रमर** which contains " two r's ".

§ 80. *Emotional emphasis.*

There is in human beings a natural tendency to vivacity and exaggeration. But with some nations it is much more marked. Thus, comparing English and French we see quite clearly that the latter people are more lively and emotional and consequently their language is more vivid with regard to words expressing feelings and emotions.[2] But the very vividness of expression leads to unconscious exaggeration. Thus the French people use words like *affreux, horrible. terrible* very often, in fact so often that the words have become almost meaningless. Among certain strata of the English people also such words as *awful, terrible, dreadful* are very frequent. They talk of a "dreadfully funny story" or "an awfully nice man" and they also say " thanks awfully ".[3] In all these phrases the adverb is used to indicate merely " very " or " very much ". In India the words **भयंकर, भयानक, प्रचण्ड,** etc., are used similarly, especially in colloquial Bengali.[4]

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[1] Cf. " a wee drappie " of the Scot.

[2] We could realise this clearly if we compare the meanings of the same word in English and in French; e.g., *spirituel* in French is " lively " or " vivacious ", quite different from *spiritual.*

[3] The language of the modern aristocratic young people in England (" the bright young things ") is clearly tending in this direction. This can be seen very clearly in the stories of P. G. Wodehouse.

[4] In the same category we must put the nasty habit found among people of all lands of freely scattering " swear words " all over their conversation. In such cases these words lose all their sting. Of course, an occasional use of a good sound *damn* (or a kindred word) is a relief to pent-up emotion, and does not necessarily imply any moral depravity.

§ 81. *Prevailing use of one type out of a class.*

Familiarity with one type out of a class would naturally lead to the name of that type being used as a general term to indicate the whole class. Among animals especially the name of one sex alone is used to indicate the class, e.g., *dog*, *horse*. The Sanskrit गौः (cow) is masculine but the derivative गाय (गैया) is feminine in the Indian vernaculars because the cow (not the bull) is the more familiar animal.[1] Similarly in English the word *cow* is more familiar. रुपिया (rupees)[2] is often used to mean " riches ", which consist of many things besides mere silver coins. सियाही[3] (Bengali काली) was originally (as the name indicates) " black fluid ", but is used to mean " ink " generally. It can be qualified to indicate the colour as in लाल सियाही. So also the Urdu word *sabzī* originally " green vegetables "[4] is used as a generic name for all vegetables.

§ 82. *Laxity in the use of words due to ignorance or misapprehension.*

When this happens " occasionally " we call it a contamination and give it the name of " malapropism ".[5] But very often such usage persists and becomes " usual " in a language giving a permanently new signification to the word. Of course learned men and purists in style do not commit such errors, but ordinary people trying to use fine-sounding words from learned languages cause these confusions. Instances may be quoted from almost any language. In English we have the word *dilapidated*, which could only apply to a stone structure,[1] but we now speak of almost anything as dilapidated, even chairs. *Miscreant* is originally "misbelieving", and hence "wicked" (to blind bigots). A similar history attaches to the Gujarati पाखंड which means "roguery", but which is originally from पाषण्ड, a term applied to a sect of ascetics in the days of Aśoka, who were honoured by him.[2] In later days the word came to mean "unbeliever", which meaning the word still retains in Hindi. Among Indian Vernaculars such confusions of Sanskrit or Irano-Arabic words are fairly common. Sanskrit विवेक means "discrimination" but in Gujarati it means "good manners" and in Bengali "conscience"; स्थावरजंगम means "things moving and non-moving",[3] but in Gujarati it is used for property "real and personal"; धन्यवाद is originally "word of praise", but is now used to mean "thanks" in most vernaculars. Often this misunderstanding and confusion leads to a change of spelling based on false etymology by ignorant people. In Gujarati the word for "correct" or "reasonable" is spelt व्याजबी[4] whereas the correct word is वाजबी (Irani *wajib*, proper, expedient). Another word utterly misunderstood is मायाकुल[5] used in the sense of "being in agreement", i.e., "fit and proper". The word has nothing to do with माया (kindness),[6] but is from the Arabic *m'aqul* a derivative of

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[1] महिषः (buffalo) is mas. in Sanskrit, but the derivative भैंस (भैंस) is feminine in the vernacular for the same reason.

[2] The word itself literally means " silver ", from Sanskrit रूप्यक.

[3] From Pers. *sīyāh*, "black". This is another instance of " expansion of meaning".

[4] As in *sabzī maṇḍī* (vegetable market). Cf. Eng. " greens ".

[5] See §60 above.

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[1] The word is from Lat. *lapis*, stone.

[2] Found in three edicts of Asoka as पासंड or पाषंड. The Sanskrit form is through the Prakrit. The origin of the word is uncertain. See Woolner, *Asoka Inscriptions*, Glossary.

[3] Referring mainly to "the living and non-living".

[4] Were the framers of this spelling thinking of the proper rate of interest (व्याज)?

[5] Good dictionaries do not give it in this form but in the correct form, माकुल.

[6] The phrase आपनो माकुल पत्र almost means "your kind letter", hence probably the confusion.

'aql (understanding) and means "discerning", hence "agreeable". The word असुर meant originally the Deity (lit., the Lord of Life, असु), but later on it was misunderstood and the initial अ- was taken to be the negative prefix and a new word सुर was coined to mean "god" and असुर came to have the meaning "demon".

§ 83. *Indefiniteness of meaning in the words themselves.*

In all languages there are a certain number of words which are rather vague in sense. Tucker has put it nicely: "a word is a coin or token of language; a speaker may intend his token to represent sixpence, while to the listener its current value may either be only fourpence or it may be ninepence".[1] Thus the words *gentleman* and *lady* are what might be termed "delightfully vague" and may signify almost every grade of politeness and culture. In India the word आर्य has become such a vague word. though at one time it was sharply defined. Similarly in modern times words like द्विवेदी, चतुर्वेदी (in Hindi दूबे and चौबे) have become mere surnames. शेठ (from श्रेष्ठ), once applied to the highest and most respected person in a town.[2] is become a mere empty designation and in Calcutta it is applied to any man from Bombay. The word *Chetti* in Madras is the same word and has had the same history. The word *native*, used once in the proper sense of the people indigenous to a land, gradually became vague and was applied indiscriminately to all those whom Europeans regarded as "backward" or primitive people. Naturally the people of India deeply resented the use of this word. And the British Government have very wisely abolished it "officially".[1] High-sounding titles in every land have become degraded and meaningless until sensible modern nations have abolished them altogether.[2] In English the *Esquire* used in addressing letters was originally a distinct step upwards on the social ladder.

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[1] Op. cit., p. 373.

[2] As in the Gujarati नगरशेठ who was the highest civic authority in a city, something like Lord Mayor.

§ 84. *Differences between individual conceptions of a word.*

Closely connected with the previous cause of meaning change is the different manner in which different minds understand a word. This is especially true of moral and intellectual ideas: *good*, *wrong*, *right*, *holiness*, etc., have infinite gradations of meaning. The word **धर्म** among Hindus had a most exalted signification once, but now it means a mass of complicated ceremonial. Similarly **अशोई** among the Parsis (Avesta *aša*), *islām* among the Mahomedans and *righteousness*[3] among the Christians have all become degraded in the mouths of the modern followers of these faiths. Whatever the etymological sense (and all these words have existed long before these religions were founded), the teachers of religions have always exalted these words, and have used them in the most spiritual sense they are capable of bearing. Their followers later on have slowly brought down these words to lower levels. This is true in the history of every religion. The fullest and the most spiritual meanings of such words are to be found in the words of the original Teachers themselves, even though before their time these may not have had this exalted sense. There are many other words which have grown vague owing to the varied ideas of individuals. A person may say

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[1] A very queer use of the word *natives* in colloquial English is in the sense of "oysters" (natives of the sea?).

[2] Canada, India and Iran are among the latest such.

[3] In the Greek Testament the original is *ho dikē*.

"I *like* fruit" and "I *like* this man", and none would assert that the word *like* means the same in both. In such vague words very often the tone or emphasis means a great deal.[1]

§ 85. *Predominance of one element in a word.*

Gas as ordinarily used means one particular kind which is used for lighting or as fuel. There are many gases known, but they are hardly of interest to anybody who is not a chemist. This sort of predominance of one element or one type leads in most cases to a narrowing of meaning. Several instances have already been given ;[2] a few more may be added. In nicknames given to people of a certain class one particular characteristic is emphasized, e.g., *red-coats,*[3] *blue-jackets*, etc. Highland regiments in Bombay were known as **घाघरा रिजमिंट** (petticoat-regiment) and Parsi priests are called **सफेद पाघडी** (white-turban) owing to their distinctive dress. The word *būī* in Irani means merely "smell", but it came to be used for nice and pleasant smell, and the Parsi-Gujarati **बोय** means "incense", and **बोय देवी** (to offer incense) is used in the very special sense of offering incense at fixed hours to the sacred Fire in Parsi temples. **गुडाक** is a Sanskrit word meaning "sleep" or "sloth",[4] and **गुडाकु** in the Vernaculars means a particular narcotic mixture. In Bombay most of the bakers are Goanese and in the early days their street-cry was **घे पांउं**[5] (buy bread), and these bakers were called **घंपाउं**. Then the word was extended to include all people of Goa (in fact all Anglo-Indians), whether bakers or not.

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[1] See Ogden, *A.B.C. of Psychology*, for many such instances in our daily talk.

[2] § 69 above.

[3] Cf. the well-known phrase "the thin red line".

[4] Hence **गुडाकेश** (he who hath overcome sleep), a name of Arjuna.

[5] **घे** is Marathi for "take" or "buy"; and **पांउं** is Portuguese *Pao* (Lat. *panis*), bread.

§ 86. *Unconscious inclusion of a secondary meaning.*

This results usually in a transference of meaning. Of this type, too, several words have been noted. A good word with a very varied history is *Hind* (or *Hindu*). This is of course the Iranian form of the word सिन्धु (a large river). The name was transferred pretty early to the land itself through which the Sindhu flowed.[1] Henceforth *Hind* was the land and *Hindu* the people. Later in Persian the words came to acquire some very special meanings. The science of geometry was called *hindsah*. *Hind* also meant black;[2] and because Hindus were carried off in large numbers to be sold as slaves by the early Moslem conquerors, the word *hindu* came to mean a " slave ". There were two special products of Sindh province, horses and salt; and hence सैन्धव means both these. In borrowed words very often a particular sense alone is to be seen. The English word *curtain* was borrowed in Gujarati and became कुरतिन, and because curtains were principally used round beds the Gujarati word is confined only to "bed curtains".

§ 87. *Difficulty in accurately classifying the reasons for semantic change.*

In many of the instances given above the reasons which led to the change of meaning are very mixed—partly one and partly another. In some cases one reason seems to operate at first and another at another time. It would also seem that we cannot draw any sharp line of demarcation between the various types suggested. The human mind works in devious and varied ways and the path that has been followed in a particular case may be fairly complex. Sufficient, however, has been stated above to prove that semantics really form a most fascinating branch of linguistics and that the study of words throws much light on the varied experiences of the human race in different lands, because semantics deal with the *human* aspect of language.

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[1] The earliest mention of the land *Hind* is found in the Persepolis Inscription of Darius the Great.

[2] As in the famous line of Hāfiz:

ba khāle hind mi-bakhsham
Samarkand u Bokhārā-rā

" For the black mole (on her cheek) I would bestow Samarkand and Bokhara ".

CHAPTER VII

THE PRODUCTION AND CLASSIFICATION OF SOUNDS.

§ 88. *Phonology, Morphology and Syntax.*

So far we have been considering human speech as far as it is affected by the mind. That is surely the most important aspect of speech. It is only comparatively recently that this side of linguistics has been approached at all adequately. Even to-day most of the books deal with the details of the structure of language as regards the sounds and forms. The part dealing with sounds is called *Phonology*, and the part dealing with word-building is called *Morphology*. Both these, sounds and words, make up as it were the *body* of human speech. Syntax shows how these words are to be put together, how this body is to move and work. Syntax deals with the *life* of language. The study of bones and muscles is useful, and indeed essential, but it must always be subordinate to the life influence working upon it.

§ 89. *The importance of Phonology.*

But though syntax is the most important aspect of language, still the science of sound is usually taught first in text-books.[1] Phonetic principles are now being studied very scientifically and accurately for the various languages of the world, especially for those of Europe.[2] Each of the innumerable sounds of human speech has been carefully analysed and a very elaborate system of transcribing these sounds has been devised, by which each of these sounds can be represented by one single symbol which is clear and distinct. This system is the *International Phonetic Script* which is much more perfect and far more satisfactory than others invented earlier. The invention and the perfecting of sound-recording of late years have also been of immense service in the study of Phonetics. Records of the important languages and dialects of Europe have been scientifically made on the kymograph which enable students to investigate very thoroughly, and at their leisure, the accent and intonation of any particular language. One great advantage of these records is that the sounds recorded there can also be reproduced as slowly as desired and thus all the intermediate shades of sounds may be clearly understood.[1]

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[1] I have departed from this plan, because I definitely wish to emphasise the fact that linguistics is something more than a mere collection of "phonetic equations".

[2] In England the most valuable work on Phonetics has been done by Prof. Daniel Jones and his colleagues.

§ 90. *Production of human speech.*

As far as human speech sounds are concerned we know that only some kinds of birds can reproduce them, though every mammal[2] and bird can produce some sort of sound. The main difference in the organs for the production of sound between these and human beings (and the few birds like the parrot, the myna and the cockatoo) lies in the shape and position of the tongue. In human beings the vocal apparatus is confined within a small compass—the mouth and nose cavities and the larynx. This apparatus is worked by means of the breath going in and out of the lungs. In most cases it is the out-going breath that operates, but there are sounds in human speech which accompany the *intake* of breath.[1]

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[1] A complete set of dialect records in French and German have been compiled and English records are being also made. Such a kymographic Linguistic Survey of India is very much to be desired.

[2] Except the giraffe, which possesses no vocal chords.

§ 91. *The larynx and the vocal chords.*

In the throat, in the region of what is popularly called "Adam's apple", there is a slight bulging in the wind-pipe. This is the *larynx* and in this place the chief vocal mechanism is situated. It consists of two thin but strong elastic bands joined in the front but not at the back. These are called the *vocal-chords*. During ordinary breathing these two remain separated, thus leaving an opening like a Λ through which the breath could pass unhindered (Fig. 1 *a*). These are joined together in the front, and at the back their ends are joined to two lumps of gristle (AA) which are called *arytenoid*. These two can be brought as close as possible. When this is done, the breath passage is either completely stopped[2] or there is a narrow slit left (Fig. 1 *c*.). When the slit is not sufficiently narrow, the breath coming through just rubs against the elastic bands—the vocal chords—and we hear what is called a *breathing* or a *whisper*.[3] But when the slit is quite

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[1] These are called "inverse sounds". There are in Sindhi such peculiar sounds which are voiced and which may be called, "inversely aspirated". Thus there are three voice sounds in each class besides the nasal. Turner has described them in a paper entitled: "The Sindhi Recursives or Voiced Stops preceded by glottal closure". They are called *implosives* as distinguished from *explosives*. These sounds seem to be developing in certain Gujarati words like ब्हेन (sister), where the aspirate, as pronounced by people of certain districts, is clearly an "intake".

[2] Technically called "glottal closure". There is a slight "click" heard when this occurs. This is the sound of the Arabic *hamzatu'lqat'i*

[3] Called महाप्राण in Sanskrit.

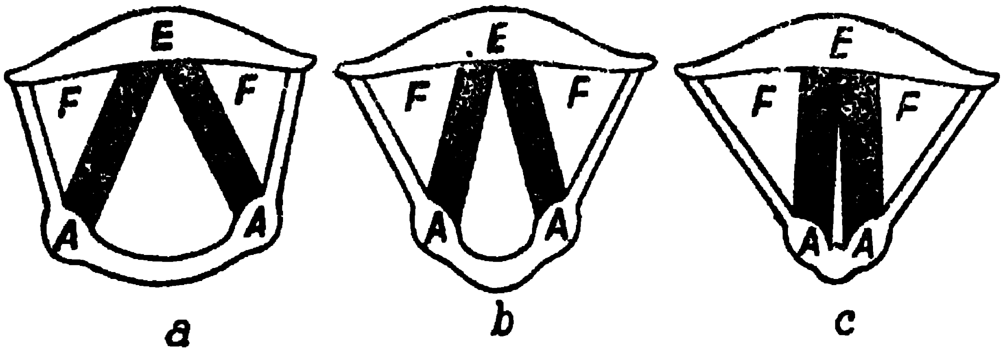

FIG. I.

The vocal chords in (*a*) breathing, (*b*) whisper and (*c*) speaking. *E*—Epiglottis. *FF*—"False" vocal chords. *AA*—Arytenoid cartilage. The vocal chords are shaded.

narrow the breath rushing out causes the vocal chords to vibrate and this vibration is heard as a distinct sound. The vibration of the vocal chords can be felt clearly if a finger is placed upon the "Adam's apple". This vibration (and hence the audibility) thus imparted to the outgoing breath is technically called *voice* or **घोष.**

§ 92. *The mouth and other parts of the vocal apparatus*[1]

Just behind the wind-pipe is the *æsophagus* or *gullet* (**गल**)[2] through which food passes. There is a small projecting process just behind and below the tongue called the *epiglottis* (**उपजिह्वा**) and when food is swallowed it drops down upon and covers the entrance to the *larynx* (**कण्ठविवर**) The wide opening common to both the larynx and the gullet is called the *pharynx* (**गलमुख** or **कण्ठाग्र**). The pharynx opens into the mouth passage (**मुखविवर**) and the nasal cavity (**नासिकाविवर**). In the mouth there are (*a*) the *teeth* (**दन्ताः**) (*b*) two flexible *lips* (**ओष्ठौ**) and (*c*) a very mobile *tongue* (**जिह्वा**). The tongue is a mass of muscle which can be made to move in any desired position and to touch any part of the upper jaw. The tongue is divided into the three divisions, the *blade* (**जिह्वाग्र**), the front (**जिह्वापृष्ठ**) and the *back* (**जिह्वामूल**). The roof of the mouth or the *palate* (**तालु**) is divided into (*a*) the *teeth-ridge* (**दन्तमूल**), (*b*) the *hard-palate* (**ताल्वग्र**),[3] (*c*) the *soft-palate* or *velum* (**स्निग्धतालु** or **तालुपृष्ठ**) and (*d*) the *uvula* (**शुण्डिका**). The last named serves often to shut off access to the nasal cavity.

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[1] See Fig. 2.

[2] The Sanskrit equivalents here given are tentative suggestions.

[3] The hard palate has been subdivided by Sanskrit phoneticians into **तालु** and **मूर्धन्** (the top or roof of the mouth-cavity). This was because of the two sets of Sanskrit sounds palatals and cerebrals.

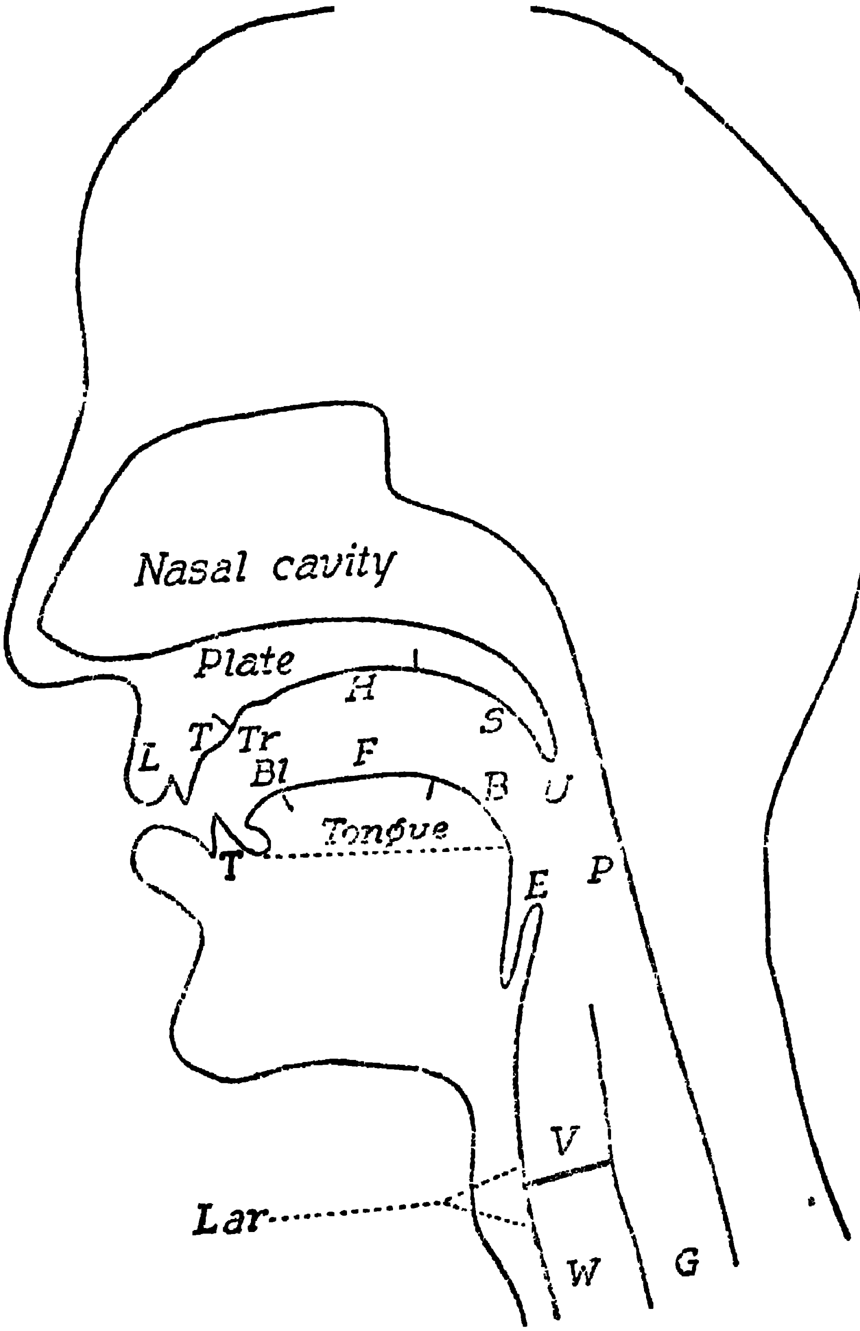

FIG. 2.
Vocal Mechanism in Man

W—Windpipe or Trachæa (श्वासमार्ग), *G*—Gullet (गल), *Lar*—Larynx (कण्ठनाल), *V*—Vocal chords (घोषतन्त्री), *E*—Epiglottis (उपजिह्वा), *P*—Pharynx (गलबिल, कण्ठाग्र), *LL*—Lips (ओष्ठौ), *TT*—Teeth (दन्ताः). PARTS OF THE PALATE : (तालु), *Tr*—Teeth-ridge (दन्तमूलम्), *H*—Hard Palate (ताल्वग्र), *S*—Soft Palate or Velum (स्निग्धतालु, तालुपृष्ठ), *U*—Uvula (शुण्डिका). PARTS OF THE TONGUE : (जिह्वा), *Bl*—Blade (जिह्वाग्र), *F*—Front (जिह्वापृष्ठ), *B*—Back (जिह्वामूल).

NOTE. Sanskrit phoneticians divide the palate into the "hard palate" (तालु) and the "roof", (मूर्धन्) i.e., the highest part of the mouth cavity.

§ 93. *Obstruction in the larynx: Voiced and Voiceless sounds.*

We have already seen that the outgoing-breath may be obstructed in the larynx and thus get "voiced". The breath may, however, pass through the larynx without the vocal chords being brought closer; but in order that it may give rise to an audible speech-sound it must meet with an obstruction elsewhere and that can only be in the mouth. Or again the breath may be obstructed *both* in the larynx and in the mouth.[1] So the fundamental point of distinction is whether there is or is not obstruction in the larynx, in other words, the fundamental division of sounds is into *voiced* or घोष and *unvoiced or* अघोष.[2]

§ 94. *Obstruction in the mouth, (i) Partial: Spirants*

The second obstruction is to be in the mouth. Here we get the various "classes"[3] of sounds according to the point at which the obstruction occurs. This obstruction may be (*i*) partial or (*ii*) complete. In the former case what happens is that the breath-stream rushes through a narrow[4] slit or opening at the point of obstruction and thus rubbing against the obstruction a "hissing" sound is produced. These sounds are called *spirants* or *sibilants* or *fricatives*.[5] One special characteristic of these sounds

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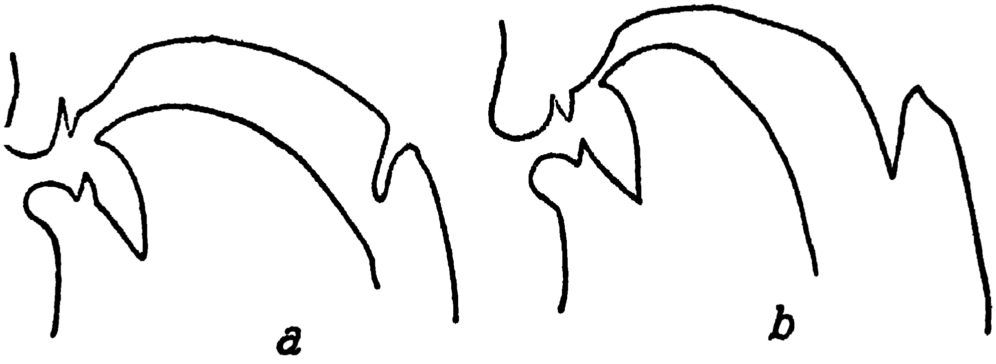
[1] Of course if there is no obstruction in either place there can be no sound.

[2] Sometimes called *media* and *tenues*, or *sonant* and *surd*, or *soft* and *hard*, respectively.

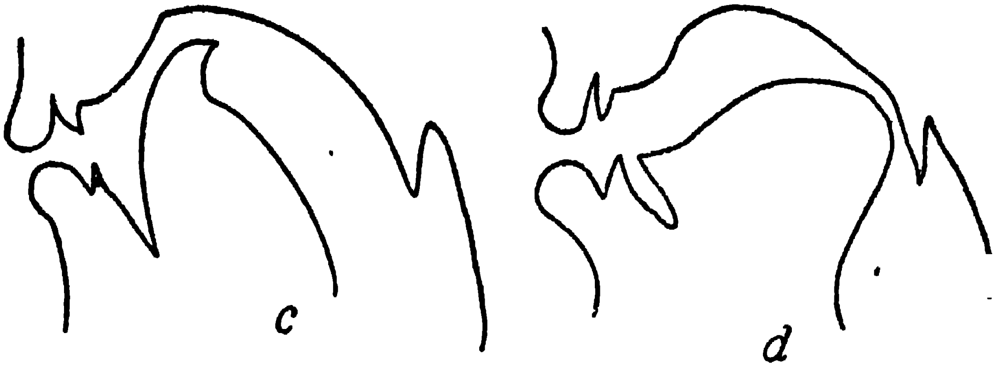
[3] E.g., the five *vargas* of Sanskrit sounds.

[4] In order that the sound be properly heard the slit must be narrow.

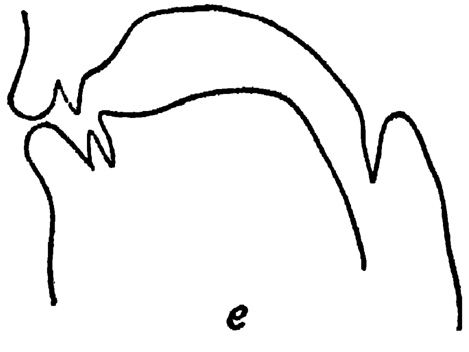
[5] *Spirant* means "breath-sound", *sibilant* means "hissing-sound" and *fricative* is "friction-sound".



Dental s. Palatal ś.



Cerebral ṣ. Velar-Jihvāmūlīya.



Labial-Upadhmānīya.

Fig. 8.

Sanskrit Spirants

is that they are *continuant*,[1] i.e., they can be drawn out and can be pronounced without the help of any vowel whatever.[2] The sounds स् (*s*), श् (*ś*), ष् (*ṣ*) in Sanskrit are of this type (Fig. 3 *a*,*b*,*c*). These are unvoiced and are called ऊष्म-sounds (lit. breath sounds)[3] in Sanskrit. There are voiced spirants too, as in Persian ز (*z*) and ژ (*ž*) which correspond to س (*s*, स) and ش (*ś*, श्) respectively but they are not found in Sanskrit. English has both these sounds as heard in *zero* and *pleasures*.[4] There are two other spirants recognised in Sanskrit, though there are no separate signs for them, both being represented by the *visarga*. The first is the velar-spirant (Fig. 3 *d*) called the *jihvāmūlīya* (जिह्वामूलीय) which is heard in the word अन्तःकरण (*antaḥkaraṇa*). The second is the labial-spirant (Fig. 3 *e*) called the *upadhmānīya* (उपध्मानीय) which is heard in अन्तःपुर (*antaḥpura*).

§ 95. *Obstruction in the mouth, (ii) Complete: Explosives*

The obstruction may be complete, i.e. no slit may be left, out of which the breath could issue. This means a complete stoppage for a moment and it is only when the obstruction is removed that the sound can be heard. The release of the obstruction sounds like an explosion. The breath imprisoned behind the obstruction comes out all at once. Hence these sounds are called *explosives*. They are also called *mutes*, because they are mute (inaudible) while the obstruction lasts. There is yet another name for these—*stops*, which is given to them because the breath is stopped by the obstruction. In Sanskrit they are called स्पर्श sounds (*i.e.*, contact-sounds), referring to the " contact " or " stop " or " obstruction ". These " contacts " can occur in any part of the mouth and theoretically there would be an infinite variety of these possible. In the Indo-Aryan languages we have kept up the old Sanskrit sounds very nearly the same as in ancient days[1] and they are divided into five "classes" according to the point of contact. Figure 4 show these points of contact.

---

[1] This name is given to a class of sounds of which the spirants form a part.

[2] So the definition that a consonant "is a sound which cannot be pronounced by itself" is not quite accurate.

[3] ऊष्मन् means "vapour" or "breath."

[4] The difference can be clearly perceived if we put a finger lightly on the "Adam's apple" and say *sss* . . . and then change to *zzz* . . . It will be observed that the tongue retains the same position, but in the latter case the vocal chords can be very clearly felt vibrating.

The double arrows show the " derivative " classes and the single ones the " primary " classes. The dotted lines connecting the "points of contact" with tongue indicate the part of the tongue which makes the contact. The breath issues from the larynx and passes out through the mouth after clearing the " point of contact ".

§ 96. *The five classes of contact-sounds in Sanskrit*

In Sanskrit the five classes are well-known and they are arranged in regular order. Of these five, three are " primary ", viz., the *k*-, the *t*- and the *p*-classes. The remaining two are derivatives from the first two, the *c*-class and the *ṭ*-class respectively. The positions of the tongue in producing these are seen clearly in the Figure 5.

Sanskrit grammarians have clearly understood the principles of phonetics and their classification is perfectly clear and the arrangement is quite logical. The three primary classes are arranged in order commencing from the inmost point of contact. The two secondary

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[1] They are best preserved in Marathi. Hence the Maratha pronunciation of Sanskrit is the purest and clearest.

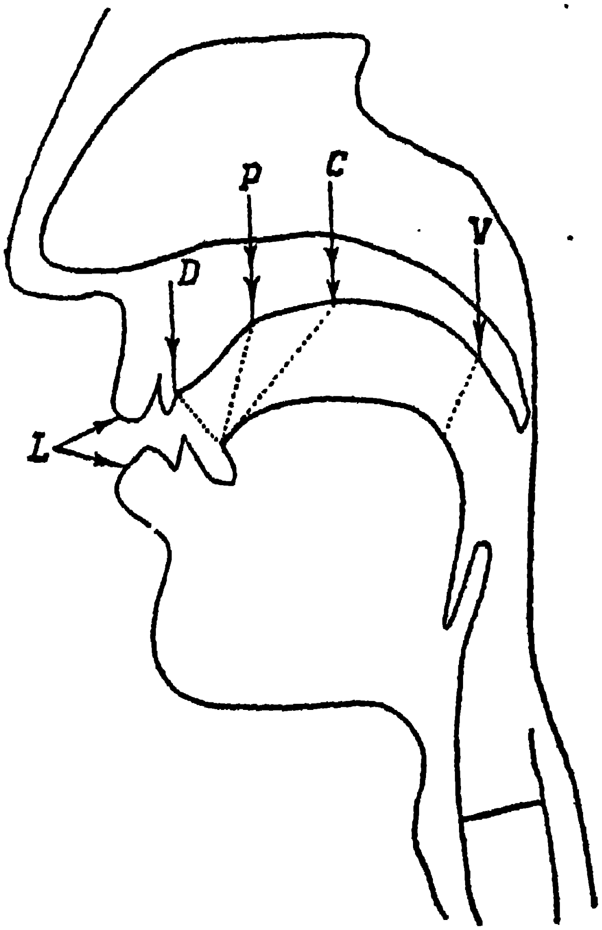
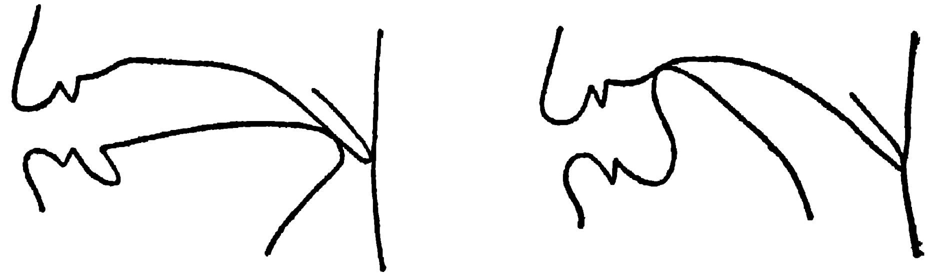
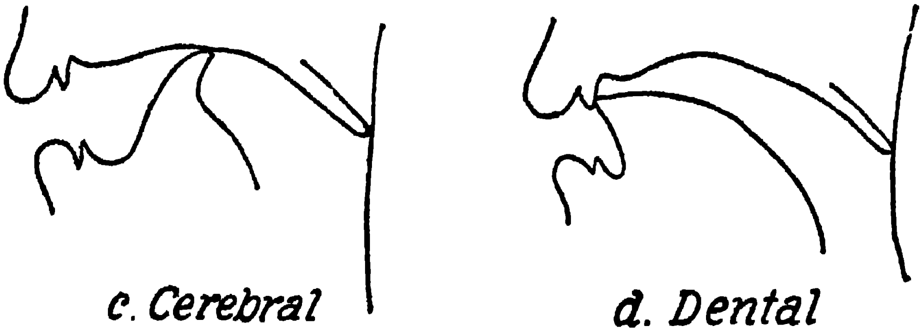


FIG. 4.

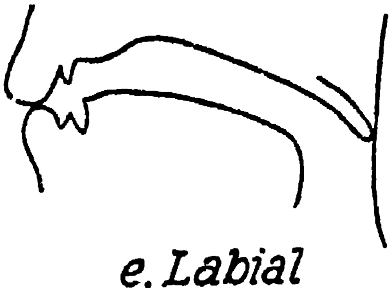
The five "points of contact" (स्पर्शस्थानानि) in Sanskrit.
V—Velar (कण्ठ्य). *P*—Palatal (तालव्य). *C*—Cerebral (मूर्धन्य).
D—Dental (दन्त्य). *L*—Labial (ओष्ठ्य).



a. Velar b. Palatal



c. Cerebral d. Dental



e. Labial

Fig. 5
Sanskrit Explosives.

classes are arranged so as to be near the primary.[1] The Sanskrit names have been already given above.[2] The old name " guttural " given to the क--class is less scientific than the modern " velar ". So also the older term for ट-class, " lingual ", has now been replaced by " cerebral ", a literal translation of मूर्धन्य. The name often used at present is *cacuminal* or *retroflex*.[3]

§ 97. *The variations found in each class*

At each of these points of contact the sound may be varied. We have already seen that the contact may be partial (ईषत्स्पर्श) or full (पूर्णस्पर्श) and then under each head there may be unvoiced sounds or voiced sounds.

Thus we get four varieties: (i) unvoiced stops, (ii) voiced stops, (iii) unvoiced spirants and (iv) voiced spirants. In Sanskrit, and to a certain extent in Greek also, there is a further variation of the stops. This is caused by the addition of a breath (or whisper) to the stop following without any appreciable interval. This addition of the breath is called *aspiration*. The stops would thus be *unaspirate* (अल्पप्राण) or *aspirate* (महाप्राण)[4].

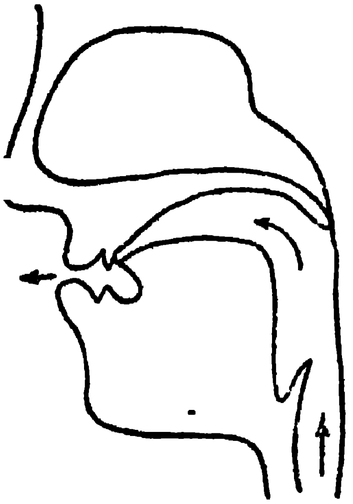
---

[1] * One would have expected the cerebrals to *follow* the dentals. The influence of the Dravidian sounds probably caused the change of order. It is remarkable that in the Brāhmī alphabet dental letters are the derivatives, and cerebrals are the primary forms.

[2] See Fig. 4.

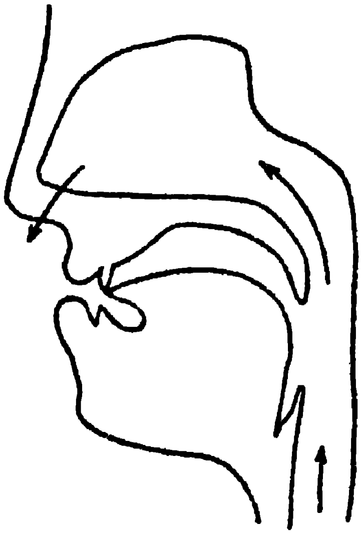
[3] The theoretical position of these sounds is a point somewhere near the junction of the soft and hard palates. The tongue is rolled backwards in these, hence the name *retroflex*. *Cacuminal* means belonging to the summit or top (Lat. *cacumen*, peak, summit, Skt. ककुद).

[4] In Greek only the unvoiced stops can be aspirate, the voiced lack the aspirated variety. So there are only *kh*, *th*, and *ph* but not *gh*, *dh* and *bh*.



Dental explosive-ṯ.

Fig. 6.



Dental nasal-ṉ.

Fig. 7.

Explosive and Nasal.

The arrows indicate the passage of breath.

In all the sounds considered so far the uvula presses back against the pharynx closing the nasal passage, so that all the breath passes out through the mouth (Figure 6).[1] But when the contact is made in the mouth and at the moment of releasing the contact the breath is emitted through the nose we get the *nasal* (Figure 7). The contact is made in the mouth and as the breath comes through the nose where there is no chance of obstruction,[2] no sound would be heard unless there is voice attached. So all nasals are necessarily voiced. Thus we get altogether seven clear varieties of sound possible for each class. Of these Sanskrit possesses all except the voiced spirants (see Table II, p. 122).

§ 98. *The vowels*

The sounds we have been considering so far are " consonants ". The usual definition given of consonants is not accurate, as we have already seen above in the case of spirants;[3] a truer definition is that they are " contact-sounds ", the contact being either partial or complete.[4] With vowels, however, *there is no contact whatever* This is the chief characteristics of vowels. And since there is no contact or obstruction in the mouth, therefore, in order to be heard at all, *the vowel must be voiced,*

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[1] The nasal twang of modern American English is due to an incomplete closing of the nasal passage.

[2] Unless through a cold the nasal passage is blocked, in which case the breath comes out perforce through the open mouth and the sound becomes the voiced unaspirate with a slight nasal twang.

[3] See § 94 above, also p. 115, fn. 2.

[4] Some scientists have maintained that animal sounds are mostly vowel-sounds, for their tongues are usually not capable of making contacts. Only a few birds possessing tongues shaped like the human tongue can imitate human speech sounds.

Class	Stops (full contact)					Spirants (partial contact)
	Oral or through the mouth				Nasal or through the nose (voiced)	Voiceless only
	Voiceless		Voiced			
	Unaspirate	Aspirate	Unaspirate	Aspirate		
1. Velar—कण्ठ्य (*k*-class; क-वर्ग)	क् k	ख् kh	ग् g	घ् gh	ङ् ŋ	: (-ḥ) Jihvāmūlīya
2. Palatal—तालव्य (*c*-class; च-वर्ग)	च् c	छ् ch	ज् j	झ् jh	ञ् ñ	श् ś
3. Cerebral—मूर्धन्य (*ṭ*-class; ट-वर्ग)	ट् ṭ	ठ् ṭh	ड् ḍ	ढ् ḍh	ण् ṇ	ष् ṣ
4. Dental—दन्त्य (*t*-class; त वर्ग)	त् t	थ् th	द् d	ध् dh	न् n	स् s
5. Labial—ओष्ठ्य (*p*-class; प-वर्ग)	प् p	फ् ph	ब् b	भ् bh	म् m	: (-ḥ) Upadhmānīya

TABLE II.—STOPS AND SPIRANTS IN SANSKRIT.

i.e., should have the obstruction in the larynx. The simplest vowel is uttered by the mouth being wide open, the tongue lying low down and the breath coming through between the vibrating vocal chords. It is the vowel *a* (आ).[1]

§ 99. *Classification of vowels*: (*i*) *Quantity*

Vowel sounds may be classified in two ways: (*i*) according to *quantity* and (*ii*) according to *quality*. The former depends upon the *time* taken to utter them in speech.[2] Usually the time is reckoned in terms of one *mora* (मात्रा) which is the time taken for a *short* vowel. On this basis we get two kinds of vowels: *short* vowels, needing *one* mora, and *long* vowels needing *two* moræ. Sanskrit grammarians have also recognised an *extra-long* (प्लुत) vowel of *three* moræ,[3] where the length is indicated by the figure 3, as in ई३. This is used for instance, in the long drawing out of the final syllable in calling a person from a distance, e.g., देवदत्त३ आगच्छ. Modern linguistics recognises an extra-short vowel also, which serves as a help in pronouncing an otherwise difficult combination of consonants.[4] Its duration in time is half a mora or अर्धमात्रा.

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[1] I have on purpose *not* adopted the usual transcription *ā* here for आ. The reason would be plain a little further on when dealing with "mixed-vowels" (§ 103).

[2] Note the words "in speech". In music a vowel may be drawn out quite a long time, and the smaller divisions, various fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, etc., of one *mora* of time are also recognised.

[3] Pāṇini, i. 2.27. See *Siddhānta Kaumudī* (Vasu's edition), p. 5.

[4] In the I.-E. parent language such a vowel is postulated (in fact it is thought to be of two kinds). It is usually represented there by the phonetic symbol ə and it is called *schwa* (*primum* or *secundum*). Its name is from the shortest vowel found in Hebrew. I prefer to call it the "*ardha-mātrā* vowel" or more shortly the *ardha-mātrā*. It is recognised by Sanskrit grammarians.

It is generally of the same quality as the following vowel. It is heard, for instance, in the pronunciation of the English name *Goldsmith*, as heard in many parts of India. The combination—*ldsm*—presents difficulties and so an extra-short *i* is inserted, and the word sounds as *Goldismith.*[1]

§ *100. Classification of vowels*: (*ii*) *Quality*

The more important classification of vowels is according to *quality*, or variation in the nature of the vowel itself. The nature of the vowel varies with the size and shape of the mouth-opening.[2]

The fundamental vowel is *a* (अ) ; and starting from that position we may make the mouth opening smaller, at the same time raising the *front* of the tongue higher and higher. This gives us the *front-vowels*. Similarly by a gradual shutting of the mouth accompanied by the gradual raising of the *back* of the tongue and a rounding of the lips we get the set of *back-vowels*. In between there is a third set of what may be called *mixed-vowels*. There is necessarily an infinite gradation possible in each of these three series but individual languages only recognize a few standard types from each series. In the front series the highest position is of *i* and among the back-vowels the highest position is that of the *u*. If we mark out the highest points of the tongue for each of these, *i* and *u* as also that of *a*, the fundamental vowel, we get an inverted

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[1] In English there is no vowel sound introduced, but a distinct hiatus (stoppage of sound) is felt lasting over about half a mora.

[2] This can be easily perceived by opening the mouth wide and uttering the vowel, *ā*. at the same time rapidly moving the palm of the hand to and fro in front of it. The vowel is heard distinctly to change.

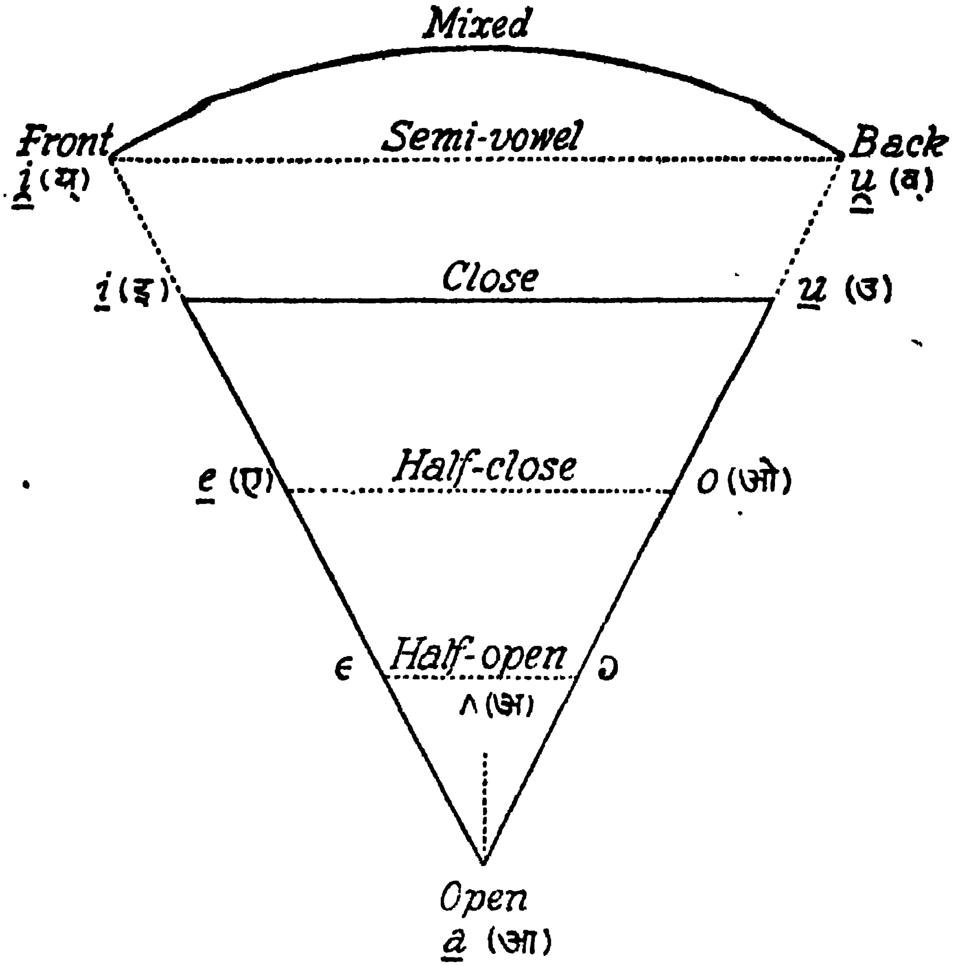

FIG. 8.
The Vowel-Triangle.

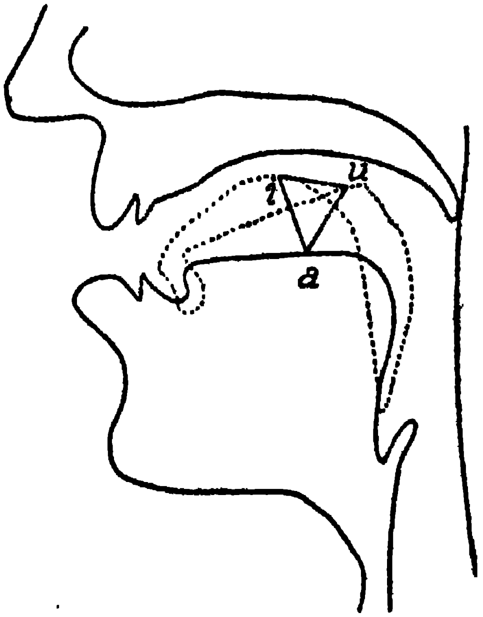

FIG. 9.
The Vowel-Triangle (Inside the mouth)

triangle which is called the *Vowel-Triangle*[1] (Figures 8 and 9). Note that all the sounds marked here are ***simple*** sounds (i.e., not diphthongs) and that ***all*** of them are different *in quality*. The seeming discrepancies will be explained further on.

With the mixed vowels their highest point falls ***within*** the triangle. There is another classification based on the height to which the tongue is raised. When the *mouth-cavity* shows the widest opening, the vowel is called *open* (**विवृत**) ; when it shows a narrow opening, it is called *close* (**संवृत**). Between these extremes there are two well-marked intermediate stages named *half-open* and *half-close*.

§ *101. Front vowels*

The position of the tongue for the four successive front vowels starting from the fundamental *a* are seen in Fig. 10.

The three grades of the openness or otherwise of the mouth-cavity for the front vowels is clearly reflected in the shape of the lips[2] as shown in Fig. 12 (p. 128).

Of these four the *a* (आ), *e* (ए) and *i* (इ) are found in Sanskrit. The *e* is developed in some of the Indian Vernaculars and is clearly heard in the Bengali word এক (*ek*). One other point may be here noted. With इ (*i*) the tongue approaches very near the hard palate, very close to the contact point of the palatals. A very

---

[1] Daniel Jones, *English Phonetics*, § 75. Figure 9 is adapted from his book.

[2] It must be remarked that unless the vowels are clearly pronounced, and with a little "exaggeration" of the main characteristics these shapes might be missed. In fact in ordinary conversation these are hardly to be noticed.

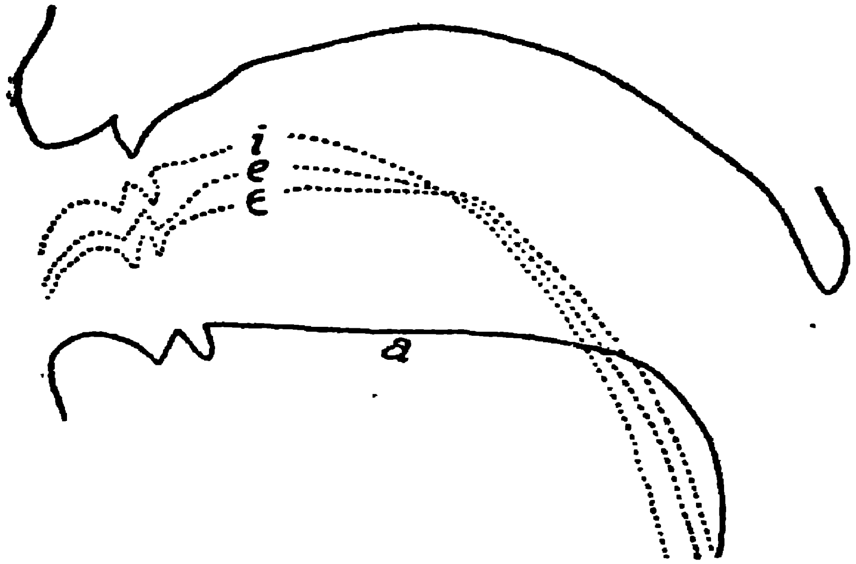

FIG. 10.
The Front Vowels

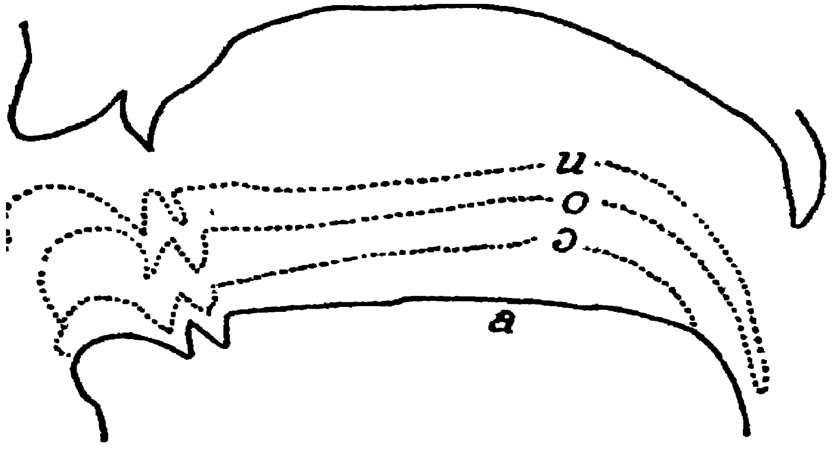

FIG. 11.
The Back Vowels.

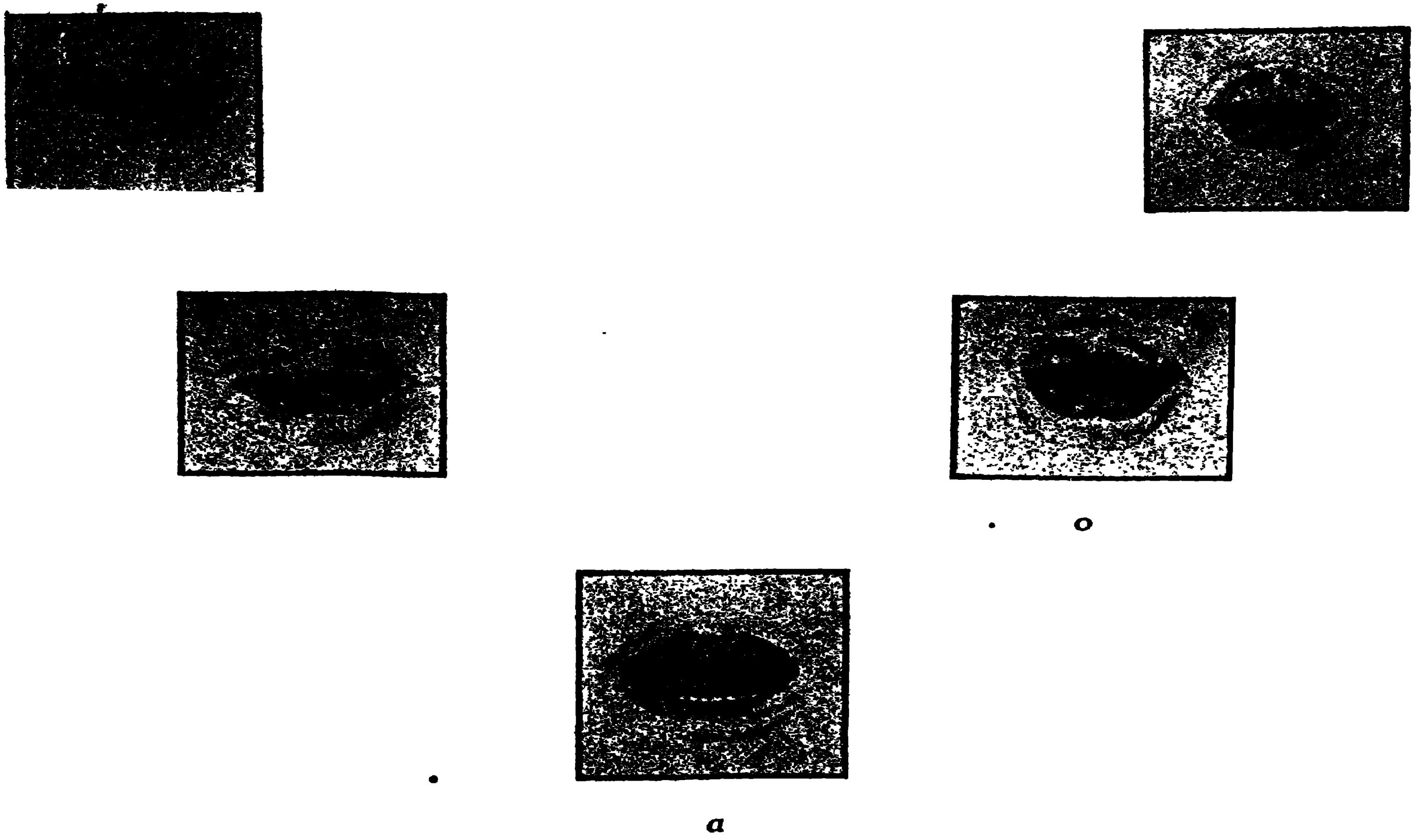

FIG. 12.
Vowel Triangle (Lips).
(After Vietor's *Elementary Phonetics*).

little raising of the tongue would make a contact and give य् (j̇)[1]. Hence the very close connection between the semivowel य् and the vowel इ.

§ 102. *Back-vowels*

Again, beginning with the fundamental *a* (आ)[2], we get in succession ɔ, *o* (ओ) and u (उ).[3] These are shown in Fig. 11.

The three grades of openness for the back-vowels are indicated in Fig. 12 (p. 128). It has to be noted that all are *rounded.*[4]

Of these the Sanskrit shows *a* (आ), *o* (ओ) and *u* (उ). The ɔ is heard in some Vernaculars. The sound is very nearly that often given to the Bengali अ (ɔ). In the back-series of vowels also a further closure of the lips would cause the semi-vowel (bilabial) u̯, through a fricative (voiced) bilabial (*w*).[1]

---

[1] The semi-vowel य् (j̇) is reached through a continuant sound य् (*y*) which may be called the "fricative *y*". This latter is the sound heard in the English words *yes* and *yard.*

[2] Daniel Jones in his *English Phonetics* takes the fundamental vowel to be two-fold (rather three-fold) depending upon slight variations observable in the standard (southern) English pronunciation. I am taking the Sanskrit आ as pronounced by the Marāṭhās as the standard for that language, and hence I start both the series with आ. The Bengali अ (often ɔ) is nearer Jones' open vowel in the back-vowels series. The modern Persian pronunciation of the "long alif" as in *āftāb* (sun) also comes near the fundamental English vowel of the back series.

[3] Jones has the series *o*, *ʌ* (अ), *o* and *u* (op. cit., § 98).

[4] In fact *rounding* the lips is a characteristic of back-vowels. Hence I do not like to follow Jones and include ʌ in this series but rather among the "mixed-vowels".

§ 103. *Long ī and the long ū*

Daniel Jones and others have with some reason put down the sounds of these two "long" vowels (ई and ऊ) as the highest grades in the front and the back-series respectively.[2] In both of these the position of the tongue is perceptibly higher than with the corresponding " short " vowels, and the vowels are " closer " as well. It is very likely that in ancient Sanskrit there was this distinction between these " long " and " short " vowels.[3] But Sanskrit grammarians have definitely laid down that the difference between इ and ई, and उ and ऊ is merely that of *quantity* and so we must leave it at that, at least as far as classical Sanskrit is concerned.

§ 104. *Mixed vowels*

In the triangle of vowels (Fig. 8) the mixed vowels are put in the middle but this does not imply that the middle of the tongue has to be raised. "There is no

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[1] The Skt. व् has been classified by grammarians as a dento-labial (वकारस्य दन्तोष्ठम्). Evidently this is a variant of the older bilabial voiced u̯. In the I.-E. parent language there were both the types of the semi-vowel, the u̯ and *w*. In Skt. though both have become व् a sharp distinction is made, inasmuch as in the case of the fricative, the व् never undergoes *samprasāraṇa* (change to *u*). Thus, वस् (to dwell) has the perfect उवास, which shows that the व् was I.-E. *u̯; but वस् (to dress) has the perfect ववसे which points to an original I.-E. **w*.

[2] These are transcribed by Jones as *i* : and *u* :.

[3] This idea seems to be supported by the " vowel-gradation " system in Sanskrit. For the difference between *i* and *i* :, *u* and *u* : see Jones, op. cit., §§ 90-92.

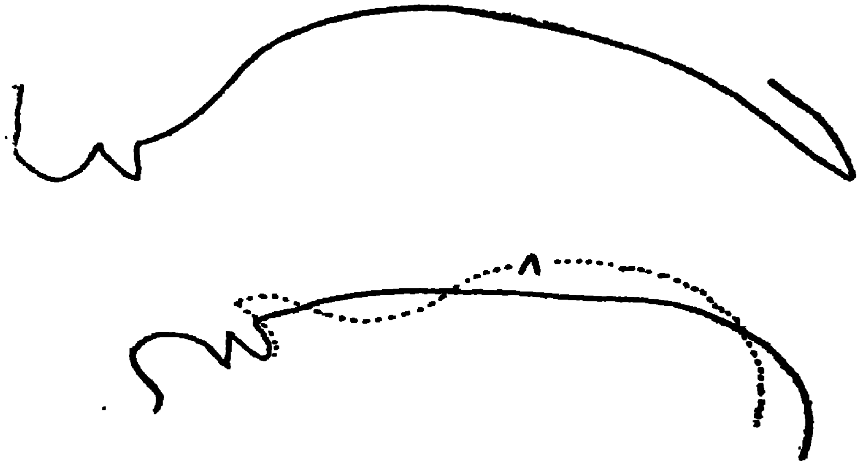

FIG. 13.
The Mixed Vowel (in Sanskrit)

rising of the tongue in the centre, but a slight *depression*."[1] Figure 13 tries to give an idea of the position of the mixed-vowel ʌ (अ) of Sanskrit. The tip of the tongue and the back are both slightly raised with a slight depression in the blade.

From the figure it is evident why the Sanskrit अ and आ are so close that they get confused together and why the Sanskrit grammarians usually regard अ as the " short " and आ as the corresponding " long " vowel.[2] Still the essential fact remains they really differ not in quantity alone but in quality as well and that as pronounced to-day (even by the Marāṭhās) they differ mainly in *quality*.

§ *105. Diphthongs*

The sounds we have considered so far among vowels are all *simple sounds*. They are each of them capable of a variation of quantity, i.e., of length. But in all languages we get combinations of two or more of these simple vowels where each is pronounced separately and the combination is felt to be a combination. Hence all diphthongs are "long" in quantity. Sometimes, as has happened in modern English, an originally simple vowel is drawn out as it were and is heard as a diphthong. The reverse process is also found, when an original diphthongal pronunciation is reduced to a simple vowel. Thus in Sanskrit the grammarians tell us that ए, ऐ, ओ and औ are diphthongs, and that their length is always two moræ. But as pronounced today they may be transcribed respectively: *e*, ʌ *i*, *o*, ʌ*u*. Thus we see that the diphthongal value of only two of these is clearly perceptible, whereas the other two have been reduced to simple half-close vowels. But the *sandhi* rules,[1] as well as comparisons with other languages, particularly with the Avesta, very clearly establishes the original pronunciation of these four. These were *ai*, *āi*, *au* and *āu*, respectively. So we see that all four have suffered from reduction. The simple sounds **a*, **e* and **o* of the I.-E. parent language have fallen together in Sanskrit as *a*, so that these four diphthongs of Sanskrit stand for no less than twelve original vowel-combinations. What should be noticed particularly is that the simple sounds *e* and *o* are *later* developments in Sanskrit and do not by any means represent the original I.-E. sounds. But though these new values have developed, they are all four treated as if they had their original values both in *sandhi* as also in metrical composition.

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[1] Dumville, *Science of Speech*, p. 53.

[2] There is reason, however, to suppose that the original pronunciation of अ was *a* (*short* आ) and *not* ʌ. The ʌ sound seems to have been a later development. This is clearly indicated by the *sūtra* अ अ इति (Pāṇini, viii, 4. 68) which says that " the अ which was *open* is now considered (i.e., is usually pronounced) close ". In view of the fact that in Skt. the I.-E. sounds **a*, **e* and **o* have fallen together it is not at all surprising to find the ʌ and *a* are also confused. Modern Linguistics has established that Skt. has confused the original I.-E. vowels and Greek has confused the consonants.

§ *106. Continuants*

We saw above[2] that the name *continuant* is given to consonantal sounds where the emission of breath is continuous. These are of four kinds: (*i*) ***nasals*** where the contact is full and the breath passes through the nose, (*ii*) *spirants* where the contact is partial in the mouth through which the breath passes, (*iii*) *semi-vowels* and (*iv*) *liquids*. The first two have been already considered. We will now consider the next two, as they are pretty close to vowels in their nature.

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[1] Particularly एचोऽयवायावः (Pāṇini vi. 1. 78) which could be explained as a special case of इको यणचि (Pāṇini, vi. 1. 77) if we restore the original forms of these diphthongs. In view of this, special value attaches to the order of these two *sūtras* in Pāṇini. See my paper on " Sanskrit Diphthongs " in the *K. B. Pathak Commemoration Volume* (Poona, 1934).

[2] § 94.

§ 107. *Semi-vowels and Liquids*

In ordinary speech[1] there are certain sounds which have no obstruction when passing through the mouth. These we call vowels and they are all voiced.[2] The rest are called consonants. This distinction is a real acoustic distinction and it depends on the relative sonority[3] of the sounds we have called "vowels". They do, indeed, carry farther than the consonant sounds of ordinary speech.[4] But in certain cases certain vowels—the close vowels of the front and the back series—may often be sounded in such a way as to sound as consonants. These are called *semi-vowels*. We have seen above how the front vowels pass into the semi-vowel *i̯* and the back-vowels into *u̯*. And we also saw that there is an intermediate (spirant) stage of *y* and *w* respectively. The spirant character of the semi-vowel is often hidden by the "voice" which they possess. There are special conditions under which a vowel could pass into a semi-vowel.[5] (i) They must be close vowels which are vowels of lesser sonority, and (ii) they must be followed by vowels of greater sonority (i.e. dissimilar vowels).[1]

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[1] I.e.. not considering whisper.

[2] See above, § 98.

[3] Hence the Sanskrit name स्वर.

[4] Hence some languages avoid all consonant sounds at the end of words and all languages allow only a few consonant sounds to be finals in words. But no vowel is debarred as final.

[5] Jones, op. cit., § 344.

Then there are the two sounds र् (*r*) and ल् (*l*). They are called *liquids*[2] because they often assume the value of vowels. These two sounds have been put by Sanskrit grammarians with the semi-vowels; but these two are essentially *consonants*, which sometimes become vowels. They are both voiced in Sanskrit.[3] They are both continuants, for with them there is a continuous issue of breath along the sides of the mouth even though the tongue maintains full cerebral contact for the र्, and the dental contact for the ल्. There are several varieties of these two. The र्, as usually pronounced in Sanskrit, today is more the trilled variety, where the tongue touches the teeth-ridge and delivers a rapid series of taps thereon. The cerebral (मूर्धन्य) *r* of Sanskrit Grammar[4] is made by making the cerebral contact (by rolling the tongue back) and allowing the voiced breath to pass out on both sides of the tongue. The sound is very like the growl of a dog and hence the Latin grammarians called the *r* the *littera canina*.[5] Here too a "trill" may be added by the regular flapping of the uvula by the passing current of the breath. The *l* also has many varieties, but in Sanskrit it is a pure dental.

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[1] Hence इको यणचि (Pāṇini, vi. 1. 77).

[2] Dumville, loc. cit., p. 85. Some writers include the semi-vowels and even the nasals among these. This is not quite unreasonable for they; all have one common quality that they can be changed to vowels.

[3] Unvoiced varieties are also possible.

[4] ऋटुरषाणां मूर्धा.

[5] Noel-Armfield, *General Phonetics*, p. 70. He mentions that the uttering of this sound "accompanied by rattle of a chain" is often sufficient to frighten away beggars and undesirable people!

There is a tendency in Indo-Aryan languages all through their history to confuse these two sounds.[1]

§ *108. Sonants: (i) Liquids*

Closely connected with the liquids are two sounds classified as vowels in Sanskrit. These are the *ṛ* (ऋ) and *ḷ* (ऌ) sounds.[2] There are occasions when the vowel connected with the liquids (*r*, *l*) drops out and then there is left a group of consonants which could not be pronounced unless one of these consonants acquires a vowel-value (i.e., it is used in building up a full syllable). In other words, in such circumstances the liquids have to be "sonantised". Thus the I.-E. root **kar-* (to do) makes the past participle by adding the suffix *-tós*. The accent on the suffix causes the *a* in the root syllable to drop out and therefore we get **krtós* which cannot be pronounced until the *r* becomes *ṛ*. So we get **kṛtós* (कृतः). In the vernaculars these Sanskrit sonants have become quite changed. The *ṛ* loses its sonant character and becomes once again a liquid with a vowel attached. Thus ऋषि (*ṛṣi*) of Sanskrit is pronounced variously as रषि (*raṣi*), रिषि (*riṣi*) or रुषि (*ruṣi*). The *ḷ* is a rare sound even in Sanskrit.[3]

§ *109. Sonants: (ii) Nasals*

Besides the liquids, nasals too (especially *m* and *n* can be sonants, i.e., can make full syllables. They ar usually denoted as *ṃ* and *ṇ*.[1] In Sanskrit these sonant nasals have become merely अ (*a*) and the nasal seems entirely lost. Thus I.-E. **men + tós* gives **mṇtós* (मतः). The Latin *mentus* preserves the nasal and gives the clue to the original sonant nasal. So also the negative prefix अ used before consonants was I.-E. **ṇ*.

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[1] रलयोरभेदः. This confusion was started because at a very earl period the Indo-Iranian branch completely lost the *l* from their speec Neither the Avesta nor the earlier Vedic show the *l*.

[2] If the syllables are voiced, the *ṛ* and *ḷ* would be heard as th finals in French *marbre* and English *marble* respectively.

[3] It occurs only in one root, कॢप्.

§ 110. *Table of Sanskrit vowels, semi-vowels and sonants.*

Table III (p. 138) shows the Sanskrit vowels in their mutual relations together with the connected consonants and sonants. Note in this table that:

(*a*) The two types of diphthongs in Sanskrit are clearly connected. With reference to the accent there is what is called *vowel-gradation*. The simple-vowels are called vowels of the *weak-grade*, the *guṇa* diphthongs are those of the *strong-grade* and the *vṛddhi* ones are said to belong to the *lengthened-grade*.[2]

(*b*) The Sanskrit grammarians give these as the *guṇa* and *vṛddhi* forms but they are not real diphthongs, hence they are put here in brackets.

(*c*) The existence of " long sonants " is a matter of dispute. I personally (in spite of the weight of Brugmann's authority) do not think long sonants (at any rate the liquids) are possible. My reasons, based on Sanskrit grammar, may be summarised as follows:

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[1] The sounds are heard in *prism* and *open* if the finals are voiced. It is rather unfortunate that Jones uses the symbols *ṛ*, *ḷ*, *ṃ*, and *ṇ* to mean the breathed (i.e., voiceless) varieties of these sounds (loc. cit., see under these symbols).

[2] See below, § 186.

Class			Simple		Diphthong		Semi-vowels	
			Short	Long	Guṇa[a]	Vṛddhi[a]		
Fundamental			...	आ	...	[आ][b]	...	
Mixed			अ	...	[अ][b]	...	...	
Front			इ	ई	ए	ऐ	य्	
Back			उ	ऊ	ओ	औ	व्	
Sonants	Liquids	ṛ	ऋ	[ॠ][c]	[अर्][b]	[आर्][b]	र्	Liquids
		ḷ	ऌ	[ॡ][c]	[अल्][b]	[आल्[b]	ल्	
	Nasals	ṇ	[अ][d]	[आ][d]	[अन्][b]	[आन्][b]	न्	Nasals
		ṃ	[अ][d]	[आ][d]	[अम्][b]	[आम्][b]	म्	

Table III—VOWELS, SEMI-VOWELS AND SONANTS IN SANSKRIT

(i) The very nature of the sonant must necessarily make it *short* and in the very closely connected Avesta, the *ṛ* is represented by *ərə* which is never long.

(ii) In Sanskrit there is no long *ḷ* admitted even by the Indian grammarians. Cf. *Siddhānta-Kaumudī* on the *sūtra* अकः सवर्णे दीर्घः (Pāṇini, vi. 1.101).

(iii) Even those cases where the long *ṛ* does occur in Sanskrit it can be explained either as a grammatical convention, as in some roots of the 9th class, such as कॄ, पॄ, etc., or as analogical formations, e.g., in the accusative and genitive plurals of nouns ending in *ṛ*, where the influence of देवान्, देवानाम्; कवीन्, कवीनाम्; गुरून्, गुरूणाम्; has led to form like पितॄन्, पितॄणाम्.

(*d*) The **ṇ* and **ṃ* are represented in Sanskrit by अ.

§ *111. The "pure" Aspirates*

Besides the aspirated contact sounds we have considered above[1] there are two further aspirate sounds to consider, as far as Sanskrit is concerned. They may be called the "pure" aspirates. These are really breathings either voiceless or voiced. The voiceless breathing is the Sanskrit *visarga.*[2] It is used as a voiceless breathing after vowels and is represented by the symbol *ḥ*. The "general aspirate" is the ह (*h*). This is the *voiced breathing* by itself, and because it is produced in the glottis Sanskrit grammarians have enumerated it amongst the कण्ठ-sounds.[3]

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[1] See Table II.

[2] The spirants in Sanskrit (all voiceless) are represented often by the *visarga*. The word means literally "emission" (of breath).

[3] अकुहविसर्जनीयानां कण्ठः.

§ *112. Full classification of Sanskrit sounds*

We may now give the full classification of the sounds considered so far with special reference to Sanskrit. These are shown in Table IV.

The one striking point about this table, based on purely phonetic considerations, is the very close agreement it shows with the *Śiva-sūtras* of Pāṇini which I have quoted. There will be noticed only two discrepancies, viz., in the position of the spirants, which Pāṇini has enumerated at the end of voiceless sounds and of the aspiration which comes at the very end. Pāṇini's order of the explosives of various kinds is somewhat different to that given here.[1]

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[1] The reason is to be sought in the exigencies of Sanskrit *sandhi*.

CHAPTER VIII

PHONETIC TENDENCIES IN LANGUAGE AND PHONETIC CHANGE.

§ *113.* "*Average*" *pronunciation*

It is a well-recognised fact that like all things in nature language is not stationary. It is always changing. But the change, at any rate in languages possessing a literary and standard dialect, is so very slow that to all intents and purposes the language may be said to have remained stationary during short periods, say during a generation or so. If this were not so grandparents would not be able to understand their grandchildren.[1] Even at one period and in one language there are differences of "dialect" depending upon social status, environment, education and a hundred other factors. In fact no two families speak the same language exactly, nay, we may go further and say that each individual speaks a language which is his own. His mannerisms, his words, his phrases, his intonation, his pronunciation could not *all* be found in any other person. But still we find that a very large number of individuals speaking one language understand one another and even foreigners who learn that language manage to make themselves understood. So there must be an "average standard" of intonation and pronunciation and the variations would be in the individuals. As long as a person keeps near enough to this average he is understood and his little idiosyncracies pass unnoticed. In fact the anxiety to be understood operates constantly and keeps the person well near the average.

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[1] Among savages who have no "standard dialect" the language changes so rapidly that a body of hunters going out on a long expedition find themselves not understood on their return home after four or five years. (See pp. 66-67.)

§ *114. How the " average " pronunciation is acquired*

In acquiring this " average " there are several clearly marked stages. Whether acquired by a native child or by a grown-up foreigner the process is the same, only in the latter case it is more or less conscious and hence not " natural " (or intuitive) but laborious.[1] The essence of this process of acquiring any language is imitation. Imitation is a deep-rooted faculty in human beings and Aristotle has said that man is the most imitative of creatures. The child learns everything (especially speech) through imitation. The following principal stages may be noted in this process of acquiring speech:

(i) The utterance of the sound in the hearing of the child;

(ii) The sound-picture produced in the mind of the child;

(iii) The imitation of the sound by the child;

(iv) The sound-memory thus produced in the child's mind;

(v) The motor-memory produced in the child's mind.

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[1] Here it may be mentioned quite clearly that no individual child is born with an inherent ability to speak any one language better than any other. The acquiring of speech is purely imitative and a child can acquire any language it hears spoken around it, entirely irrespective of its parentage. With grown-ups it is a question of getting out of acquired habits of many years, hence the laboriousness of the process. Hence, obviously, languages are best acquired in childhood.

If all these steps were perfect and merely mechanical we would get imitations absolutely identical with the original and no language would ever change phonetically. But none of these steps can be perfect. The speech of the utterer may be defective and the child may imitate the defects of the speaker.[1] The hearing of the child may be defective and hence its sound-picture may not be exact. The imitation by the child may be defective owing to defective vocal organs, or want of proper control over them or failure of the elders to correct the defects.[2] The child hears not only one speaker but many, and while imitating it strikes the average. Naturally its imitation would come nearest to the speaker it hears oftenest. Hence foreign languages are best acquired from native speakers.[3] The third step is the most important and it must be very carefully watched by teachers and parents. By continuous repetitions and practice the "sound-memory" of the particular word or phrase is finally established and with it (in fact almost as a part of it) there is the "motor-memory", the memory of the movements of the vocal organs needed to produce it. These last two stages are best exemplified when acquiring at a later age some new language, especially a language whose script is very different. At first the printed or written sign has to be consciously connected with the "sound-memory" and the "motor-memory" and each word has to be painfully "spelt" out,[1] but once the "motor-memory" is established the language comes quite rapidly. In fact the finest and quickest way to acquire a language is to be surrounded with speakers of it, so that the last two stages may be firmly established. And soon there comes the time when a mistake made in speaking a language is immediately detected by the *ear*[2] of the speaker himself.

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[1] The "nasal-twang" of America may be traced back to the nasal psalm-singing of the Puritan "Pilgrim Fathers".

[2] Many fond parents like the "lisping" of children and instead of correcting them actually encourage this habit. A great many people have bad speech because their parents never corrected them. I knew a gentleman who pronounced all velars as dentals.

[3] In my own case I learnt English in India from Indian teachers, and I found when I went to England that I could not make myself understood until I *consciously* tried to imitate the sounds I heard around me. An English acquaintance of mine, who at first laughed at my pronunciation, afterwards helped me to acquire it correctly.

§ 115. *Individual deviations from the average are important factors in language.*

Though the individual speaker strikes an average and even though he be very carefully trained, still he would betray small differences from the standard type. These differences may be very small intrinsically, but in the course of years these mount up and thus we find that language changes definitely in course of time. The individual seems all the time to be subject to his environment, but he also reacts upon it. The phonetic deviations of an individual are very varied and due to many causes. Very often it is the desire to imitate some well-known public character—some great statesman or religious preacher. It may even be the desire to imitate some snob in the smart set. The pronunciation "fellah" (for *fellow*) heard so often to-day is due to a desire to be smart. A few decades ago the smart set in England used to have a queer drawl in their speech.[1] In Irani it is now fashionable to say *Irūn* and *īshūn* for *Irān* and *īshān*. In Bengali the word छिलाम (*chilām*) is often pronounced by good speakers either as *chilum* or *chilem* and such good speakers would always find imitators.[2] In Gujarati too there was Narasingrāo Divātia, who was a great writer as also a fine speaker and conversationist and an authority on the language, and he moulded Gujarati pronunciation very markedly.[3] There are purists in every language who try to set the standard. But the point to be remembered is that it is *an individual* (who may be utterly unknown) who sets the ball rolling. And the deviation may be due to a desire of a scholar or a purist to be absolutely correct, or it may be due to a slackness in pronunciation due to carelessness or ignorance. In fact most of the sound changes are not produced through the influence of scholars or purists but through the carelessness of the general mass of speakers.[4]

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[1] I have had similar experience in learning Persian and Bengali. I have also known a child so badly taught that he could only *spell* out his English reader.

[2] So also for those who do a lot of reading and writing a word wrongly spelt is shown up glaringly to the *eye*. I know people who when in doubt about the spelling of a word write it out in various ways and accept that which *looks* correct.

§ *116. Sound changes proceed in one direction and are uniform.*

When a phonetic change has started at any particular period it does not go back. In other words, there is no compensating change in the other direction to restore the "average". If that were so languages would hardly change at all. The essential fact is that *the "average" itself is slowly but surely changing.* Once a change has begun in one direction in one group of sounds a similar change *in the same direction* would begin in an allied group. The reason for this latter may not be the same as that which began the first change. In fact it seems more than possible that a subtle form of analogy is at work here. Thus we see in Germanic languages there occurred two "sound-shiftings", which embraced all the original explosives and moved exactly in the same direction.[1] It must not be imagined that these changes occur in one group *after* another. They occur more or less simultaneously, if a tendency, which might be called a "linguistic drift", is once set up. Hence *all phonetic changes in language tend to be regular.* The establishing of this truth was a matter of prime importance in the history of modern linguistic research because it raised the subject to the dignity of a science. It is on account of this regularity of phonetic change that we get phonetic "laws" which have *nearly* all the force of laws of science. They are almost unalterable and because they are unalterable they enable us to predict. Words postulated for different languages, but unknown in the records at that time, have been subsequently discovered when fresh inscriptions and records have come to light. This power of prediction is a characteristic of all laws of science and this the phonetic "laws" do possess.

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[1] I believe it was the influence of Lord Dundreary (of the whiskers). A good deal of information about the smart set of those days and their ways of speech could be gathered from the *Punch* of those days.

[2] There is a class of Bengali speakers today who deliberately imitate Rabindranath Tagore in all his mannerisms. It is but a form of homage paid to a great man.

[3] He was specially insistent on correct pronunciation and he deliberately spelt phonetically in all his writings. The controversy about correct Gujarati spelling has not yet been finally settled.

[4] Is this why many writers speak of phonetic *decay*?

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[1] These are known as the first and the second sound-shiftings. They were first formulated by Rask and later by Grimm. Popularly we know them under the term *Grimm's Law.* See §§ 121 ff.

§ 117. *Phonetic " Laws "*

What has been stated above is not quite in accord with the notions an average person has of lingustics. The ancient notion still persists that "in philology consonants have little value and vowels no value at all".[1] So it would be well to define exactly what we mean by phonetic " laws ". As Tucker says very rightly, this is a " much abused expression ".[2] We hear this expression in connection with every language we may happen to investigate. One important fact has to be borne in mind. If we are investigating a particular sound in any language at *the present time* we cannot lay down any phonetic " law " but we speak of a phonetic *tendency* in a particular direction. Thus we may say that there is a tendency in English to-day to aspirate the initial *h* in certain words where it was mute. So also in Bengali we may speak of a tendency towards a strong stress accent, or in Gujarati of a mixing up of the palatal and the cerebral sibilants, or in Persian of having the front and back vowels more close and of the explosives being aspirated. In none of these cases could we speak of a phonetic "law". All our phonetic laws have been tendencies at one period, and only when their work has been completed, have they become laws. Many of these tendencies may be changed or may cease operating and there may be a few that successfully complete their work. Some may complete the work in certain localities only. Thus the change of Aryan **s* to Iranian *h* under certain circumstances[3] was a tendency which affected the whole of the Iranian branch, whereas exactly the same tendency in Gujarati (change of an original *s* to *h*) is strictly confined to a few districts, and to a particular social stratum.[1] Hence as a definition of phonetic law the following given by Tucker seems about the most accurate:[2]

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[1] And hence queer derivations, like Arabic *kitāb* from Sanskrit पुस्तकम् still persist, (See below, § 278, ftn.)

[2] *Introduction to the Natural History of Language*, p. 304.

[3] Mostly when initial.

A phonetic law of a language is a statement of the regular practice of that language at a particular time in regard to the treatment of a particular sound or group of sounds in a particular setting.

§ 118. " Exceptions " to phonetic laws

If all the phonetic tendencies in language depended solely upon the working of the vocal organs,[3] phonetic laws would be quite mathematical in their precision. But we have seen already that the speaker or rather the human mind is the most important factor in speech. And this would at any time run counter to these phonetic " laws ". In short, the human mind is absolutely supreme in language and, being quite autocratic, is beyond any laws. Besides this main source of "exceptions" there are several others which may be considered. In the first place a borrowed word would obviously not come under the influence of a phonetic law unless it was borrowed at a period anterior to the law itself. Thus the Sanskrit word *karma* borrowed in English quite recently does not obey Grimm's Law. This is very well illustrated in the case of Latin words borrowed into Germanic *after* the first, but *before* the second sound-shifting. Being borrowed words they do not show the first shifting but they do show the second. Thus Latin *pondus* was borrowed fairly early in Germanic (Gothic) as *pund*,[1] but in Old High German it has become *phunt* owing to the second sound-shifting. Dialect words, too, are often exceptions. A phonetic law mainly refers to a particular dialect, usually the "standard" dialect of literature.

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[1] This is a special peculiarity of the dialect of my own village, and even though many of us have lived all our lives outside it and have been "well-educated", still the village words and pronunciations persist at home and are especially to be marked when several of us foregather. This is specially to be noted for Scotchmen among the English-speaking peoples.

[2] Tucker, op. cit., p. 306.

[3] Precisely for this reason Tucker (op. cit., p. 307) pleads for the word " rule " instead of the word " law ". He maintains that the word " law " implies " stringency of application ". I personally would prefer (with the Junggrammatiker) the word " law ". I would maintain that the word " exception " should mean a case which goes counter to a law and could *not* be explained by any other known law. If it can be so explained it ceases to be an " exception ". Hence because the " exceptions " to phonetic laws are only apparent, the word " law " in this connection cannot be said to lack in " stringency of application".

§ *119. Alternating "classicism" and "romanticism" in literature.*

Many writers deliberately use archaic words and indeed they may succeed in reviving obsolete words and forms. Thus in Gujarati many older forms and endings have been revived by Narsingrāo Divātia and Nānālāl and Khabardār till they have become re-accepted into current Gujarātī. Narasingrāo especially is particularly fond of these revivals of fine old Gujarātī words and phrases. So also we find in English Chatterton deliberately using obsolete words[2] and many modern poets going back to pure English words instead of the usual ones derived from Latin.[1] This deliberate " revival " of ancient words is seen in the history of every language. There are periods in every literature when the language becomes "learned" and shows the influence of "classical" languages. Then there is a reaction when the indigenous or "native" words are used in preference to the " classical " words, which are felt to be pedantic. In English there is a clear tendency to use good old English words to-day in place of Latin words.[2] In Bengali Rabindranath Tagore has set the style for reviving old genuine Bengali words in place of Sanskrit words and a reaction is plainly visible against the too classical style represented in the previous generation by Iśvarachandra Vidyāsāgara and others. In Gujarati Govardhanrām Tripāṭhī and his school have been too recent, but still signs are clearly seen of the coming reaction against sanskritising.[3] The dominance of the vernacular after a time degenerates into vulgarity and this gives a chance again for the revival of "classicism". In all these cases discussed above we often get an ancient word used practically as a borrowed word and hence probably running counter to the phonetic tendencies of the language today. We may not quite see this point, but these would provide future investigators with phonetic puzzles, because to them these words would be "exceptions" to the phonetic laws prevailing in the 20th century.

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[1] Eng. *pound* (weight). For further examples see Max Müller's *Science of Language* (1899 ed.), II, pp. 255f.

[2] Chatterton made many serious mistakes owing to his ignorance. A very strange case of a similar deliberate attempt to write an old and nearly forgotten language is found in passages of Later Avesta trying to reproduce the older Gāthic dialect of the Avesta.

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[1] This partly explains the alternating phases of classicism and romanticism observed in most literary languages.

[2] In Inida the first teachers of English in the closing years of the 18th and the beginning of the 19th century were imbued with a spirit of classicism. The influence of Macaulay and his style is very clearly seen in the English taught to the older generation of Indians. about seventy-five years or more ago. And this classical style (though modified a great deal) continues in our schools even to-day. I remember an instance of this style which happened in a school in Bombay in my boyhood. The clerk of a school was asked by the Headmaster to send round a notice that teachers should see that the boys did not make too much noise during school hours. The clerk, who had been trained entirely in the ancient manner, sent round the following wonderful composition : " There has emanated a peremptory mandate from the higher tribunal that every pedagogue should exercise circumspect vigilance over every stripling that is under his charge" !

[3] I think that as national feeling grows and as the realisation (though slow) comes that one is an Indian first, and only afterwards a

§ 120. *Analogy is the most fertile source of these "exceptions."*

But all said and done such borrowings from another language, or from earlier stages of the same language, explain but a small percentage of exceptions to phonetic laws. The most disturbing factor is analogy. A very good example (orthographic only) we saw above in the three words *should*, *would* and *could*. Another fine instance is of the three words forming a "natural group"—*father*, *mother* and *brother*. The *th* in all three now sound alike, but in the original Germanic they were not the same. In Old English they were *fader*, *moder* and *broder*[1] and in German *Vater*, *Mutter* and *Bruder*. In modern English analogy has levelled away the differences of pronunciation.

Hindu or a Moslem or a Parsi, this unreasoning dominance of Sanskrit in our vernaculars would assume correct proportions in our languages. I have read some Gujarati "translations" from Sanskrit which are really Sanskrit with Gujarati pronouns, auxiliary verbs and particles put in. I would much rather read the original! As regards Gujarati I have discussed the question in detail in my "Main Currents of Gujarati Literature," which forms the introductory essay to Vol. I of my *Selections from Classical Gujarati Literature* (Calcutta University).

[1] The difference is due to the original accent in the I.-E. as explained by Verner's Law (see § 123).

Another type of " exceptions " to regular phonetic rules are to be found in borrowed words which are made to sound more or less like the native words. Here too " analogy " works through an associated group of sounds. A good example is the Sanskrit word क्रमेलक (camel) which is borrowed from the Semitic. The insertion of *r* and the suffix *-ka* seems to make it sound like Sanskrit.[1]

§ *121. Grimm's Law*

Grimm's Law furnishes a good example of a " phonetic law ", and its history shows also very clearly how the modern standpoint was reached, viz., that " phonetic laws have no exceptions which could not be explained as due to the working of the human mind". This famous law was first formulated by R. Rask and Ihre. But it was Grimm who gave it its elaborate form and gave numerous instances of it, and hence his name has been always associated with it. It refers to the sound changes in Germanic languages[2] which took place at two distinct periods. The first occurred in prehistoric ages and differentiated the Germanic consonant-system from that of the other branches of the Indo-European. This is called the "first sound-shifting ". The " second sound-shifting " occurred about the 7th century A.D., or a little earlier, and differentiated the High German from the Low German dialects. The law of Grimm can be clearly understood from the accompanying diagram (Fig. 14). If we take the sounds marked at any of the three points of the triangle to re-

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[1] Very possibly there is " popular etymology " also working connecting it with the word *krama* and referring to the usual leisurely gait of the animal.

[2] Closely similar deviations of sound occur in other families of languages as well as among dialects of various languages.

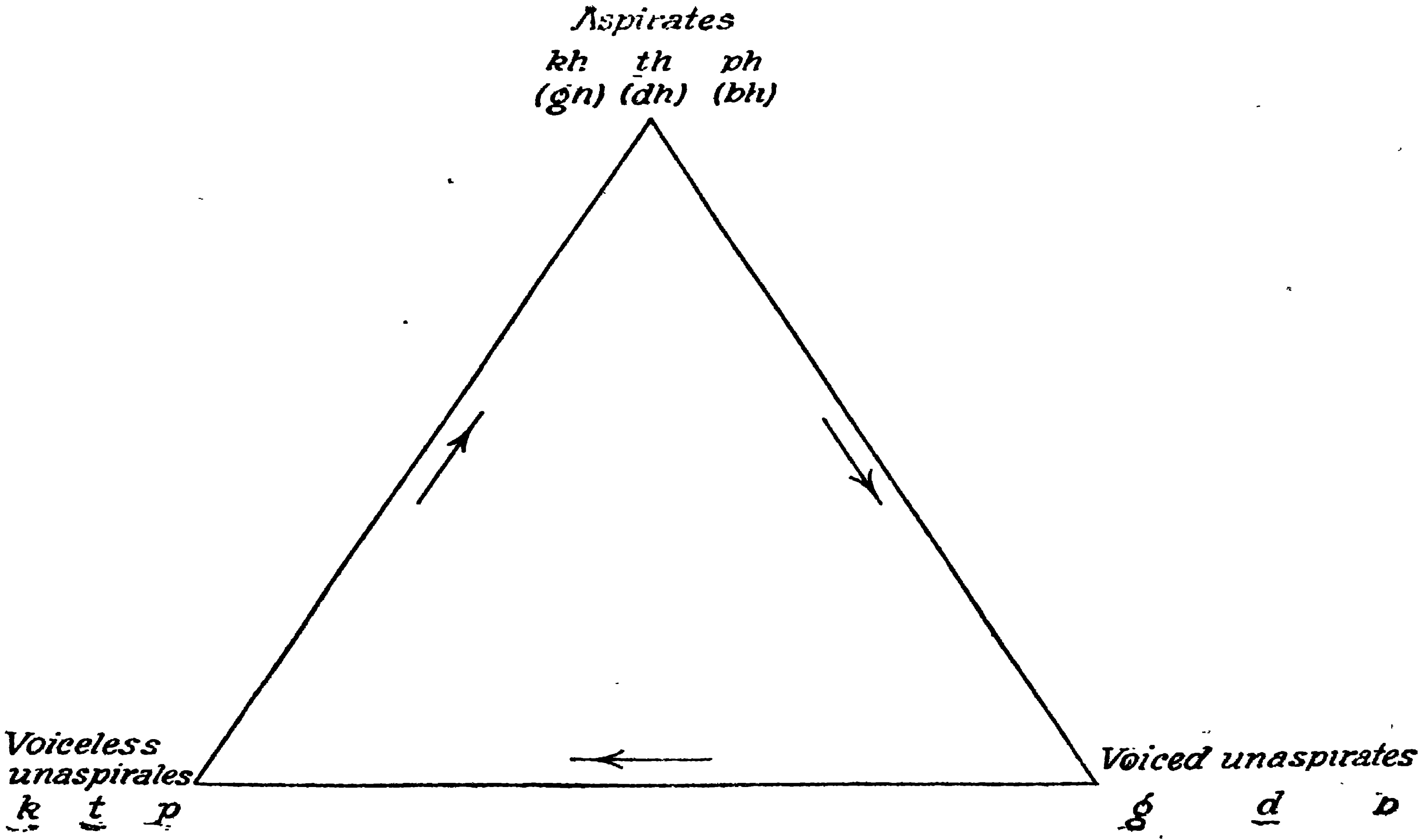

Fig. 14. Grimm's Law.

present the parent I.-E. sound (best preserved in Sanskrit, Greek and Latin)[1], then the Germanic (i.e., Gothic and Low German) sound corresponding would be got by taking *one* step in the direction indicated by the arrow. This is the first shifting. For High German (Modern German) we take one further step (the second shifting) in the same direction.

The statement of the law is not quite so simple as might be thought from the diagram. The law is exactly as stated here for the dentals in all positions and for all classes if we start at the top of the diagram. In other cases we find that *usually* there is only one step in the sound-shifting. Note that in Sanskrit the voiced and voiceless aspirates are kept distinct, whereas in other languages even though both varieties may be found (as with the dentals in Gothic and English) they are mixed up a lot. Note also that true aspirates are found only in early Greek and Sanskrit. In the other branches, and in later Greek also, these changed to spirants or fricatives fairly early.[2]

§ 122. *Examples of Grimm's Law*

A few examples may be given·

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[1] These are to be taken in the order mentioned, Sanskrit representing the parent language most closely. Note that the law refers to *consonants* only.

[2] See tables given at p. 95 of Wright's *Historical German Grammar*, I.

Indo-European			Germanic		
Skt.	Grk.	Lat.	Goth.	Eng.	H. Ger.
कः	..	quo	hwô[1]	who	hwër[2]
त्वम्	...	tu	...	thou	du
पिता	..	pater	...	father	Vater[3]
...	...	papa	...	...	babest (OHG.)[4]
ह्यस्	...	hes-	gis(tra)	yes(ter)	këstre (OHG.)
धृष्	thrasús	...	(ga)daursan	dare	turren (OHG.)
भवा(मि)	phúō	...	bêom	be	pim (OHG.)
जनः	genós	genus[5]	kuni	kin	chunni (OHG.)
दश	déka	decem	taihun	ten	zehn
...	túrbē	turba	thorp	thorp	Dorf

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[1] The *h* in Goth. is a spirantised sound akin to an aspirated *jihvāmūlīya*, or Arab. خ (*kh*). The *w* of the Goth. corresponds to the *u* in Lat. and goes back to I.-E. *u̯. The aspirates have become spirants in German also, and have had a special development.

[2] The change of Germanic *h* to High German *g*, and of *f* to *b* did *not* take place.

[3] Note that in Ger. *f* and *v* sound alike.

[4] The word means "the Pope" and the Lat. word is *Papa*.

[5] The Sanskrit is जनः, the original velar becoming palatalised in presence of the front-vowel *e*.

[6] Here the Skt. *ś* goes back to an original I.-E. palatalised velar. The treatment of this sound has given rise to the distinction between the *centum*- and *śatam*-languages. (See § 204).

§ 123. "*Exceptions*" *to Grimm's Law*

The above is a fairly simplified manner of enunciating Grimm's Law. But Grimm himself had remarked that there were a large number of "exceptions" to this statement of his. He himself saw that certain of these exceptions were quite regular. Thus in the combinations **sk*, **st* and **sp*, the *s* prevented the sound-shifting from taking place. So also in the combinations **kt* and **pt* the *t* remained unchanged; and **tt* became in Gothic *tht* and later *ss*. Examples:

Indo-European			Germanic		
Skt.	Grk.	Lat.	Goth.	Eng.	H. Ger.
...	...	pisces	fisks	fish	Fisch
अस्ति	ésti	est	ist	is	ist
स्पश्[1]	...	spicio	...	...	spëhón(OHG.)
अष्टा[1]	oktō	oct	ahtáu	...	acht
नप्ता	...	neptis	...	...	nift (OHG.)
वित्त[2]	...	..	wissa	(y)wis	wissa(OHG.),(ge)wiss

§ 124. *Grassmann's Law*

Grimm himself had accounted for many so-called exceptions but still there were a lot more left. There were some particularly trying equations, which seemed to break this law completely. Thus बोधति and Gothic *biudan* and

[1] See p. 155, ftn. 6.

[2] Past participle to विद्; to know.
Used adverbially to mean, "surely", "certainly".

Old High German *bēotan* (to bid) are clearly connected but the initial *b* sound *both* in Sanskrit and Gothic is very puzzling. Similarly Sanskrit दभ् and Gothic *daubs*[1] show in *both* cases an initial *d*. It was Grassmann who solved this difficulty. Fully conversant with both Sanskrit and Greek, he knew the ordinary rule which holds good for both these languages, namely, that if two consecutive syllables are aspirates the first becomes de-aspirated. We get such examples in Sanskrit as दधामि, बभार, जुहोति etc. and in Greek as *títhēmi péphuka, kekharómēn* etc. Grassmann compared the Greek and Sanskrit forms together and though the initials were different, this very fact gave the clue. Thus, in the two cases we have taken the words including the Greek would be put thus: बोधति —*peúthetai*—*biudan* and दभ्—*tuphlós*[2]—*daubs*. Now the only way in which we can reconcile the Sanskrit and Greek initial sounds (ब्, *p* and द् *t*) is by postulating that *both* go back to the same I.-E. aspirates (**bh* and **dh*). In Greek these voiced aspirates, represented by the voiceless *ph* and *th* would give immediately by Grassmann's Law *p* and *t* and in Sanskrit ब्, and द्, and *also* the initial *b* and *d* in Gothic would follow from Grimm's Law[3]. Thus Grassmann's law explained a lot more of the exceptions.[4]

§ 125. *Verner's Law*

The next and the most important supplementing of Grimm's Law was by Karl Verner. He discovered that the operation of the law of sound-shifting depended on the position of the accent. He laid down that an original *k, *t, *p changed in Gothic in accordance with Grimm's law if the accent *preceded;* but if the accent was on the vowel *following*, the shift was a *double* one, i.e., to *g*, *d*, *b*. Examples:—

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[1] Means "obstinacy" or "obduracy". The Ger. *taub* means "deaf".

[2] Means "obscure" or "blind".

[3] Thus the postulated I.-E. roots would be **bheudh*- and **dhobh*-.

[4] Sanskrit words like छिद् and छद् are also special cases of Grassmann's Law according to Max Müller, *Science of Language*. II, pp. 271f

Skt.	*yuvaśás*	Lat.	*juvencus*,	Goth	*juggs*[1]	(not *jughs*)
	śatám,		*centum*,		*hund*	(,, *hunt*)
	saptán,		*septem*.		*sibun*	(,, *sifun*)

The working of Verner's Law can be seen very well in the conjugation of the strong (i.e., irregular) verbs in Germanic languages, e.g., *friosan* (to freeze) and its past participle *gi-froran; kiosan* (to choose) and its past participle *gi-koran;* also in nouns, e.g., *wolf* and *wulpa* (she-wolf); *swĕhur* (father-in-law) and *swigar* (mother-in-law).[2]

§ 126. *The growth of precision in phonetics*

The history of the various phonetic laws we have been considering so far shows us quite clearly how the science of phonetics has gradually grown in precision. When Grimm's Law was first formulated the exceptions were so many that it could hardly have been termed a "law" at that period. But later discoveries and supplementary laws (like those of Grassmann and Verner)[3] tended to reduce the number of exceptions. Even then there are left a fair number of cases where none of these laws are obeyed. And here the explanation is to be found in the psychological laws of language. In fact we are now arrived at a stage when we may assert that there are no exceptions which cannot be explained. Added to this are the growing precision in the methods of phonetic research, the use of the laryngoscope, of the kymograph, of recording apparatus and so forth, as well as of more precise symbols to represent the finer differences in pronunciation and intonation. Of course, none would assert that we have investigated phonetics to the fullest extent, but we do assert that we have attained a degree of precision unknown in the older days; and instead of being derided, the science of language is becoming more and more respected to-day and is regarded as a study worthy of great minds.[1]

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[1] In Goth. *gg* stands for *ng*.

[2] All these instances are from Old High German.

[3] There are several other laws besides supplementing Grimm's Laws.

§ 127. *Sound etymology is based upon precise phonetic laws.*

So far we have been considering phonetic laws in general and as an example we considered Grimm's Law for Germanic languages in some detail. We have similar phonetic laws for each language and dialect and a thorough investigation of these is of the utmost importance Of course the phonetic laws of one language are very different from those of another. Hence it follows that words utterly different from one another in *sound* are often identical in origin. For instance, ऋत and Avesta *aṣa*, श्रुत and *loud*, शश: and *hare*, जीव: and Greek *bios* and *quick* are cognate groups. This led Max Müller to lay down the dictum that "sound etymology has nothing to do with sound".[2] And the modern student of linguistics always views resemblance or even identity in the sounds of words from two different languages with suspicion. Very often words entirely different in origin come to be pronounced similarly even in the same language, e.g., *bear* in English, ऋक्ष (" bear " or " star ") in Sanskrit are but two examples out of a very large number. So varied are the workings of the human mind that unless one is absolutely sure of every link in the chain and has carefully examined each vowel and consonant between two words, one should never venture to postulate any etymological equation. Hence one must be quite sure of the phonetic laws of the languages one is comparing. There are now-a-days many accurate "etymological dictionaries" for many languages, so that while working at a new group of languages one can learn a lot by a judicious use of these works. And on sound etymology depend all the fascinating branches of linguistics—Semantics, Urgeschichte, Comparative Mythology etc.

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[1] The bestowal of the Order of Merit on Sir George A. Grierson, the organiser and inspirer of the *Linguistic Survey of India* in June 1928 is surely a sign that linguistics has now been recognised as deserving a place among the sciences.

[2] Science of Language, II. pp. 303 ff.

§ 128. *Causes for the differences between the phonetic laws of different languages.*

That there are different phonetic laws for different languages is a well known fact, but this is not due to any intrinsic inability of any people to pronounce any particular sound or set of sounds. There is no inborn ability (or disability) in a particular race to utter any particular sound. It is all a question of habit and practice.[1] It is well known, for instance, that a person habitually speaking one language feels "fatigued" if he has to speak another language. But this is due merely to a different set of muscles being brought into use and thus feeling the strain.[1] The special phonetic differences between various languages are due to a large number of causes which have not yet been clearly analysed. In fact, it is at present only a hypothesis of certain scholars that climate, soil and food, as also the habits and customs of a people, are determining factors in this matter. It has been maintained that the peculiar English intonation, especially of vowels as distinguished from that of (say) the Italians, is due to the damp climate of England. It would be well worth investigating these influences. The sounds made by the familiar animals would also seem to have some effect; and so there seems to be a germ of truth in the well known saying of the Emperor Charles V that he would use German " to talk to his horses ",[2] for among the European branches of the I.-E. family the Germanic tribes have used horses very largely.[3]

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[1] *Individuals* may have a malformation of the mouth or the tongue and may thus be unable to utter certain sounds.

§ 129. *Saving of effort is the root cause of phonetic changes*

Whatever the causes, there is for every race a "phonetic habit ", which develops in particular directions at particular periods. But there are certain fundamental principles which govern sound change in languages generally. Most languages have phonetic laws of harmony or of euphony which are often appealed to in order to explain certain sound changes. We are told that certain sound-combinations are " ugly ". But the word " ugly " is largely relative in its significance. A Greek never thought the combinations *khth* or *phth* "ugly ", but Sanskrit has never allowed it. On the other hand a Greek would not have tolerated any final consonant except *n*, *r* and *s*, whereas in Sanskrit "almost all consonants occur as finals of roots, and every root is liable to be found, alone or as the last member of a compound, in the character of a declined stem".[1] So the only definition of " ugly " in this connection would be " that to which the people are not accustomed". We must look deeper for causes of sound change than " euphony " or " harmonious sounds ". The main cause is *saving of effort*. This is not due to any laziness and does not imply any moral weakness. It is due to purely physical causes. It often acts in a way exactly the reverse of what one would have expected, inasmuch as it may lead to intrinsically more difficult sounds being substituted for simpler ones.

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[1] Max Müller has recorded (op. cit., p. 206) that though he had lived longer in England than in Germany, still he felt fatigued if he spoke English for a long time, but not at all if he spoke German. This, he says, was due to a " phonetic habit ". I had noticed myself that an hour's lecturing in classical (i.e., standard) Gujarātī fatigued me while a lecture of similar duration in English or in my own vernacular (Parsi, Gujarātī) left no effect. Such cases only indicate which particular language is habitually used by a particular person.

[2] Charles V was the master of a large part of Europe and a fine linguist. He is reported to have said " I speak German to my horses, Spanish to my God, French to my friends and Italian to my mistresses".

[3] I had heard in my boyhood that the characteristic glottal sounds of Arabic were imitated from the camel!

§ *130. Ways in which saving of effort may be effected*

This saving of effort is seen in many and varied directions. And these are given diverse names by scholars. We may consider a few of these, viz., (*a*) Metathesis, (*b*)

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[1] Whitney, *Sanskrit Grammar*, § 139 a. But in derivative words there are only a small number of finals permitted in Sanskrit. Conjunct consonants are not permitted as finals in grammatical forms nor, as a rule, aspirates. (Whitney, op. cit., §§ 141-152.)

Prothesis, (*c*) Epenthesis, (*d*) Anaptyxix, (*e*) Haplology, (*f*) Assimilation and (*g*) Dissimilation.

(*a*) *Metathesis.* When we get a combination of sounds very often we find that they are interchanged. The reason for this is mostly carelessness of speech, though sometimes there is a clear easing of effort in pronouncing two conjunct consonants by changing their positions. As examples we may quote Avesta *vafra* and Persian برف (*barf*) (Hindi, बरफ), Sanskrit उन्दिर and Bengali इंदुर. Sometimes both forms are used in the same language, e.g., we find the name of the city pronounced both as लखनौ; and नखलौ; we have also in Sanskrit नारिकेल, and नालिकेर, in Gujarāti डुबवुं and बुडवुं. Sometimes however a slight difference of meaning may be noted, e.g., Gujarātī टपकवुं (to drip) and पटकवुं (to throw down), also चरखा (spinning wheel) and चक्र (wheel).[1]

(*b*) It often happens that a word begins with a combination of consonants which are hard to pronounce. There is a distinct easing if a short vowel, usually an *i*, is put in front. This is called *Prothesis*. Thus, our vernacular pronunciations of the English words *school*, *station*, *stable* as इस्कूल, इस्टेशन and इस्तबल (or असतबल) are good instances. In some languages this is invariably found before all words beginning with a combination of *s* and another consonant. French and Persian are notable examples. Latin *schola* gives French *école* (school), Latin *spatula* gives French *épaule* (shoulder). In Persian we get *istādan* (to stand) from an original Aryan form **sthā* and *ustun* (pillar) from Aryan **stūn*; *Plato* becomes *Iflātūn*.[2] This type of prothesis is closely connected with anaptyxis[1] and we may get anaptyctic and prothetic forms side by side. There is another type of prothetic vowel which does not seem to be due to an initial conjunct, such for instance are the Greek words *arē'r* (Sanskrit नृ, नर) *ónoma* (नाम)

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[1] Curiously enough in vulgar Gujarātī the word चक्रम् is used for a "mad-cap", one in whose head the wheels are gone wrong.

[2] See Platts and Ranking, *A Persian Grammar*, § 3(*a*). The word अफलातुन is used in Parsi Gujarātī in the sense of "magnificent" or "strong".

(*c*) Sometimes we find that some easing is needed in the middle of a word and hence a vowel is inserted in the body of a word. This vowel is usually of the same quality (front or back) as the vowel or semi-vowel which immediately follows. This is called the *epenthetic* or " anticipatory " vowel. This is seen very clearly in comparing Avesta words with Sanskrit, "for epenthesis is one of the characteristic ṣound phenomena of the Ạvesta".[2] As examples may be quoted *bavaiti* (भवति), *airyō* (आर्यः), *mainyuš* (मन्युः), *aurušō* (अरुषः), *haurva* (सर्व), *tauruna* (तरुण).[3]

(*d*) *Anaptyxis*[4] is called स्वरभक्ति by our grammarians. This is a vowel (not initial) inserted between two conjunct consonants. Thus very often we get anaptyxis instead of prothesis. Among our vernaculars Panjābī has developed this form of easing especially with initial conjuncts containing *s*, e.g., सटेशन for *station*, सकूल for *school*, सटूल for *stool* and so on. Anaptyxis is specially used in easing combinations with *r* and is clearly seen in comparing vernacular words with their Sanskrit originals; e.g., धरम for धर्म, परकार for प्रकार, भगत for भक्त, and so also from Persian

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[1] See below under (*d*) of this section.

[2] Jackson, *Avesta Grammar*, § 70.

[3] Very often in the Avesta a prothetic vowel is also " anticipatory " and it may or may not be for the purpose of easing the pronunciation. Examples *irina ti* (रिणक्ति) *urūpayeinti* (रोपयन्ति) *iθyajō* (त्यज-Jackson, op. cit., § 71.

[4] See Gune, *An Introduction to Comparative Philology*, p. 51.

khodā-bakhsh (God-given) we get Gujarātī खोदाबखस.[1] In Sanskrit itself we find such forms as सुवर्ण and स्वर्ण, पृथिवी and पृथ्वी. A variety of anaptyxis is the insertion of a *consonant* between two sounds to help in passing from one point of contact to another. This helping consonant serves often as a sort of consonant-glide. Examples are: सूनरी (Vedic Sanskrit) and सुन्दरी, Sanskrit वानर and Gujarātī वांदरो.[2] The insertion of the nasal in words like वांक (Sanskrit वक्र> Prakrit वक्क), तांबडी (a waterpot made of copper, ताम्र) etc., is clearly in the nature of anaptyxis.[3] So also the word मुम्बई (an ointment said to be made out of a *mummy*) shows consonant anaptyxis. In the recitation of Avesta by present-day Parsi priests we find countless instances of anaptyxis.[4]

(*e*) *Haplology* occurs when in a word one whole syllable (i.e., a vowel plus consonant)[5] drops out. Such dropping happens most often if the syllable following the one dropped contains the same consonant. In English we have the *Welsh-rabbit* for *rarebit*, and it is also found working in the "portmanteau-words" *cameleopard*, *cinematinée* etc. The shortening of phrases in colloquial may be cited also as examples of haplology. Of course in many colloquial phrases and in rapid speech such dropping of syllables would be very common. And in these cases other factors, like the sentence-accent, intonation etc., of the language are also to be taken into account. In borrowed words very often we find such shortenings, e.g., *Ashburner* becomes in Gujarātī आसबरन. Common names often show similar shortenings like नारण for नारायण and कनु for कनैया (कृष्ण), in which other causes also might be traced.

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[1] The word is used among Parsis generally for anything that comes " God-given ", i.e., " gratis ".

[2] पसिन्दो a vulgar dialect form of पसीनो(प्रस्वेद) is another instance.

[3] The Bengali हांसपाताल (hospital) shows a similar nasal.

[4] E.g., *xšnaoθra* is pronounced खश्नोथर, *xšaθra* becomes खश्थर or even खशथर, *fravarətas-cā* becomes फरवरेतस्चा and so forth.

[5] If only a vowel drops out it is called *syncope*.

(*f*) *Assimilation* as the name implies is the change of one sound into another in the neighbourhood so that both sounds may be produced from the same point of contact. This would mean a distinct easing of effort. It can be *progressive* when an earlier sound affects a later or *regressive* (or "anticipatory") when a later syllable affects an earlier one. The change of Sanskrit words into Prakrit (or to put it more correctly from Old Indo-Aryan to Middle Indo-Aryan) is often characterised by assimilation. Thus we get पद्द (पद्म), दुग्गा (दुर्गा), धम्म (धर्म) etc. We also find it in Gujarātī लीलो (नील) "green", in Latin *quinque* (five) from I.-E. **peŋque*. The rules of *sandhi* in Sanskrit are mostly examples of assimilation.[1]

(*g*) *Dissimilation* is the opposite process. Very often the repetition of the same sound is felt to be tiring to the vocal organs and relief is sought in changing the point of articulation. Sanskrit पिपासा gives Hindi प्यास (> पियासा), नवनीत gives Marathi लोणी (> नोनीत), पिपीलिका becomes Prakrit किपिल्लिका. In English *marble*, (*marmor*)[2] and *turtle*(*-dove*) as compared to German *Turtur*(*-taube*) are good examples. The deaspiration in the ordinary reduplications of Sanskrit verbs are instances of dissimilation, e.g., तिष्ठ् from स्था, जिघ्र from घ्रा. Grassmann's Law is another instance of dissimilation.

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[1] Such rules as those about the change of न् to ण्, and the rules स्तोः श्चुना श्चुः ; ष्टुना ष्टुः ; and many others.

[2] Cf. Guj. संगेमरमर (from Persian *sang-e-marmar*).

§ 131. *Popular adaptations of foreign words*

All these various forms of phonetic effort-saving are best seen when foreign words are adopted into a language and are gradually naturalised. Popular etymology is at work in all these cases, the main idea being that the sound of the naturalised word should adapt itself to the phonetic groups of the language. We have *artichoke* transformed into Bengali हाथीचोख ("elephant-eye"), *railway* in the Gujarātī of the middle of the 19th century became वेलवेल.[1] I have heard *library* called *Rāe-Bareli*[2] and *omlette* becoming नामलेट or even *marmalade*. *Rhubarb* was rendered in Gujarātī a generation ago as लोहिबाग.[3] But most amazing are the transformations of European proper names in the mouths of Indian servants. Mackenzie becomes मखनजी (butter), Ludlow becomes लड्डू (sweet-ball) and a colleague of mine at Benares, Macdermott, became दालमोठ[4]!

§ 132. *Accent*

In speech we neither utter all the words in a sentence nor all the syllables of a word in the same tone. Usually in a sentence we emphasise a particular word which we regard as important. Thus the sentence, "he shall go tomorrow to Bombay" might mean different things according to the different words on which stress is laid. Similarly in a word also a particular part is emphasised. Of course in monosyllabic languages of the isolating type a word has no component parts, but tones are employed to distinguish between words of similar sound.[1] Where, however, words are made up of a " root " and a " grammatical affix " either of these may take this emphasis and various phonetic changes take place in consequence. The emphasis thus laid upon particular parts of a word or a sentence is called *accent*.

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[1] A sort of double-assimilation. There was also the cross-influence of the pure Guj. word वेल (from वह्) which meant a bullock vehicle much used in the pre-railway days.

[2] An important town in Uttar Pradesh.

[3] Popular-etymology is again at work here; लोहि (blood) indicates the colour of the plant as also it blood-cleaning property and बाग directly refers to the vegetable kingdom.

[4] दालमोठ is parched pulse fried in butter or oil and spiced with salt and pepper!

§ *133. Stress-accent and Pitch-accent*

Accent may be of two kinds. One variety is called the *stress*, and the other is called the *pitch* or " the musical accent ". In stress-accent all the force of breath is spent on the accented syllable, so that the accented syllable sounds stronger. The effect of a stress-accent language on the ear of a stranger is like that of successive blows of a hammer. In the pitch-accent the voice is raised or lowered according as the syllable is accented or not. So that a language which has the pitch-accent predominant sounds very " sing-song " to a stranger. Among the stress-accent languages we may mention, English, Modern Greek,[2] Welsh, Persian and among the ancient languages Avesta and Latin. Among languages with pitch-accent may be mentioned Vedic Sanskrit,[3] Homeric Greek, and most of the Indo-

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[1] See below Chap. XIII.

[2] I once heard an oration in Modern Greek by the late Prof. Delbrück. The effect on my ear was stunning. The accent, like blows of a hammer, was quite painful.

[3] The very definitions of the accents in Skt.—उच्चैरुदात्तः । नीचैरनुदात्तः । समाहारः स्वरितः । (Pāṇini, i.2.29-31)—can only refer to the raising and lowering of the voice as with the pitch-accent.

Aryan Vernaculars of today. It must not, however, be supposed that when we speak of one kind of accent in a language that the other variety is entirely absent from it.. We mean only that one particular variety is predominant, and that its effect is most marked. It is also to be noted that languages seem to pass from one variety of accentuation to another, though the reasons for this change are not quite clearly understood. Thus, we know that Homeric Greek had a pitch-accent, while Modern Greek is very clearly stressed. We also may note that Bengali is at present developing a stress and so also the Parsi dialect of Gujarātī.[1]

§ *134. Effects of the stress-accent*

The phonetic effects of these two varieties of accent are very different. With the stress-accent there is a tendency to reduce or to drop the syllables (i.e., vowels), in the immediate neighbourhood of the stressed syllable. The reason is quite obvious. The stressed syllable needs all the volume of breath, and thus leaves very little or none for its immediate neighbour. If the word is a sufficiently long one, there may be another subordinate (or secondary) accent developed. Thus, take the English word *literature* which has a strong stress on the first syllable, we find that the tendency is to drop the vowel in the second syllable and to pronounce the word " 'litəriʃə* "[1] [लिट्रिच (र)] as if it were spelt *litrature*. So also the word *extra-ordinary* has a strong stress on the *o* and is pronounced "eks'trɔ:dineri "[1] [एकस्ट्रोडिंनरि]. Avesta furnishes many good examples of the effects of the stress. The prevailing accent there is a stress on the penult as in *caθwā'rō* (Sanskrit चत्वारः), but when an enclitic *-ca* is suffixed the accent shifts reducing the long vowel to *a*: *caθwarás ca* (Sanskrit चत्वारश्च). Another very good example is the Gāθic word *ptā* (=Sanskrit पिता), the strong stress on the final syllable changed the Aryan **pitā'* to Avesta *ptā'* So also the compound *tát-āp* (possessing falling water, i.e., full of rain) stands for *ptát-āp*, originally *patát-āp*.[3]

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[1] This is clearly due to the Iranian tradition of the Parsis, which has been strengthened by the growing English habit among them. However correct the Gujarātī of a Parsi may be in grammar and idiom, his accent (especially of a Bombay Parsi) generally sounds foreign. As a Parsi myself I have been able to catch more or less correctly the Bengali accent, but when I speak Hindī, I am told that I " speak like a foreigner ", although I speak the latter much more fluently and correctly than I do Bengali. The reason is that I am unable to intone properly the Hindī accent. It may also be noted that when Hindī or Punjābī-speaking Indians talk English they do it in a " sing-song " fashion because some of their vernacular accent still clings to their speech.

§ *135. Effects of the pitch-accent*

The effect of the pitch-accent is markedly different. It changes the *nature* of the vowel. Generally it tends to make a close vowel more open[4] Thus *i* changes to *e* and *u* to *o* under the influence of the pitch-accent. In the I.-E. parent language the accent shifts about in word-building and in form-building. In some it is on the root

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[1] The pronunciations are as given in Daniel Jones' *An English Pronouncing Dictionary*. The Nāgarī transcripts are merely approximate.

[2] *ptā* is found Yas., xv. 11 and elsewhere also.

[3] See Bartholomae, *Altiranisches Wörterbuch*, 631.

[4] Pitch is musical tone and the accented syllable has got more vibrations per second (i.e., is at a higher pitch) than the unaccented. As every singer knows a higher note necessitates a wider opening of the mouth. This is probably the physical explanation of this change.

(or stem)[1] syllable, in others it is on the ending (or (प्रत्यय). The original reason for this shifting of the accent might have been to indicate which was regarded as the more important component of the word.[2] Of course each branch of the I. E. parent-stock as it progressed developed its own accent rules, which often ran directly counter to the original scheme in the parent-language. Thus, in Sanskrit in the case of nouns the accent usually remains throughout on the same syllable.[3] In Greek there is developed the "trissyllabic law", which does not allow the accent to go beyond the third syllable from the end. But these particular laws have been later developments. The effects of the original shifting of the accent survive even though these new rules have caused the accent to shift again. It is these *original* effects that we consider mainly when dealing with the I.-E. languages. The effects are seen in what is called *vowel-gradation.*

§ *136. Vowel-gradation*

We have seen above that in vowels we have two series—the front and the back. And with each series is associated a semi-vowel. Thus we get two series of sounds including at one end the semi-vowel and at the other the long diphthong. These are:

1. *e*-series: *i*, *i*, *ī*, *e* (**ai*), *ai* (**āi*)
2. *o*-series: *u*, *u*, *ū*, *o* (**au*), *au* (**āu*)[4]

---

[1] The word *root* is used for verbs (तिङन्त), while *stem* usually implies a noun or pronoun or adjective (सुबन्त).

[2] See my article on "Parasmaipada and Atmanepada" in the *Dr. Ganganath Jha Memorial Volume.*

[3] Except with monosyllabic nouns or with such as are oxytona (i.e., have the last syllable accented). See Whitney, *Sanskrit Grammar*, §§ 314-320 for details.

[4] For the forms marked with asterisk see above, Chapter VII (§ 105).

[Facing § 186]

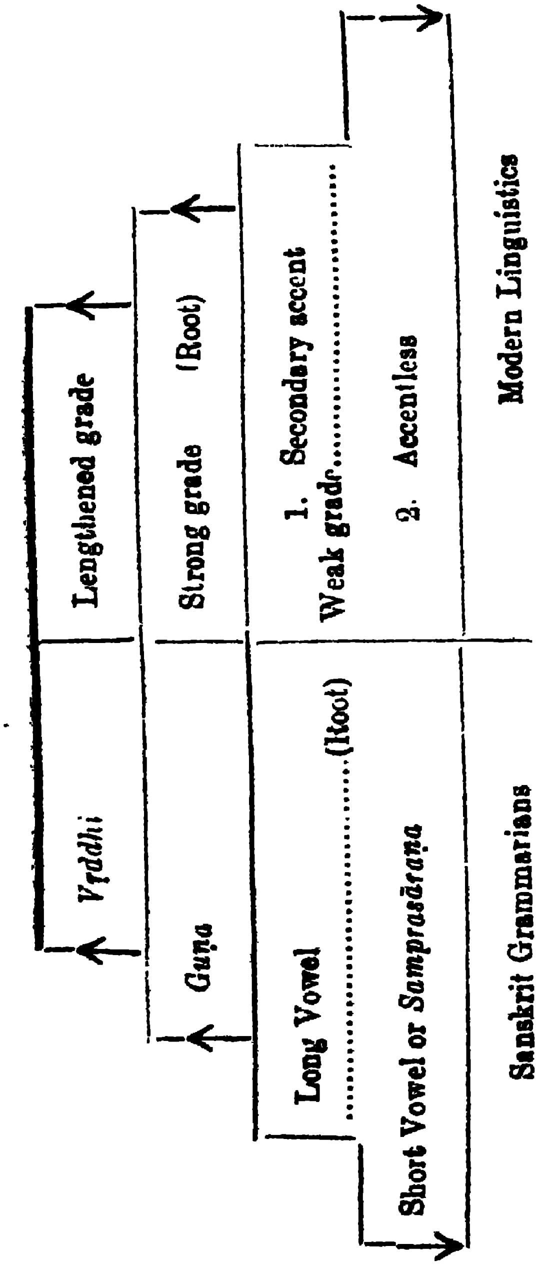

FIG. 15.

VOWEL-GRADATION.

In Sanskrit grammar we know these as the संप्रसारण-गुण-वृद्धि series. Their mutual relations can be best represented as in Figure 15. The gradations are here shown as steps,[1] on each step is indicated its name as well as its equivalent in Sanskrit grammar.[2] It will be noted that the " weak-grade " is subdivided into two sub-steps according as the syllable is entirely accentless or bears the secondary accent. There is one important difference in the way vowel-gradation is approached by Sanskrit grammarians and by modern Western scholars. The former look upon the "weak-grade " as the original and describe two other steps as successive strengthenings. The latter, however, regard the " strong-grade " as the original and take one step upwards for strengthening (i.e., वृद्धि) and one step downwards for weakening (simple vowel or संप्रसारण).[3] The facts described are exactly the same but the points of view differ.

§ 137. *Ablaut*

The word *ablaut* means literally "change of the (vowel) sound". And almost all writers use the word in the sense of " vowel-gradation " as well. The change of vowel may be along the graded series (strengthening or weakening), or from one series to another (back to front). The changes noted under vowel-graduation in the previous paragraph are of the former sort. But there is also another change of vowels as well, the change from one series to another, which may be called the *qualitative ablaut*.

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[1] German scholars call them *Stufe* (steps).

[2] It may be noted that the equivalents are somewhat different according as we consider the long-vowel series or the short-vowel series. The diagram is more or less for the short-vowel series which shows all the steps.

[3] This is very likely due to the comparative method, especially as the forms of roots considered from Greek and Latin are the 1st pers. sing. of the present, which are always in the "strong-grade ".

This is best observable in Greek[1]; e.g., *phéro*: *phóros; leipō*: *liloipa; patér*: *eupátor*. In these instances we find the vowels of the *e-series* changing to those of the *o*-series. "The interchange between the *e* and *o* and between *ē* and *ō* seems to have been so regulated that *e* originally stood in the chief accented syllable and *o* in the next following syllable".[2] The explanation offered for this change is that *e* being a front-vowel and *o* a back-vowel, the former has naturally a higher pitch than the latter. Hence when the accent shifts from an originally accented front-vowel, the latter is changed to the corresponding lower-pitched vowel of the *o*-series.[3] We also find in Greek a change from the *a*-series of vowels to the *o-series*; e.g., Doric *phāmi*: *phōné*. I personally desire to use the term "ablaut" for the *qualitative*-change only and the term "vowel-gradation" for the *quantitative*-change. Thus we would avoid needless complications and ablaut would then have a meaning closer to its original sense. Hence we may assert that there is no true ablaut observable in Sanskrit, for here, as we have seen the original I.-E. vowels *ā̆. *ē̆ and *ō̆ have become only *ā̆ (अ or आ).

§ 138. *Vowel-gradation and Ablaut in Indo-European*

Vowel-gradation is one of the distinguishing characteristics of the I.-E. languages. Comparing the forms in various branches of this family we find that there are six series of vowel-gradation in the parent-language. These are named after the principal-vowel (i.e., the accented vowel) in the strong-grade. Each of these is subdivided into varieties according to the sound associated with (i.e., following) the principal vowel. These sounds are the semi-vowels (*i̯* and *u̯*), the liquids (*r and l*) and the nasals (*n* and *m*).[1] Thus we get the following varieties of vowel-gradation-series in the Indo-European:

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[1] In Sanskrit, as already mentioned above (§ 105), the three I.-E. vowels **a*, **e* and **o* have fallen together, and hence the *qualitative* Ablaut, as here described, is not observable in it. See remarks at the end of this paragraph.

[2] Wright, *Comparative Grammar of the Greek Language*, § 83.

[3] This is a mere tentative explanation. Wright says (loc. cit.), that "it is most difficult to account for this phase of ablaut."

A. Short-vowel series:

I. *e*-series. II. *a*-series. III. *o*-series.

Each of these may have the following sub-varieties:[2]

1. The vowel by itself.
2. The vowel + *i̯*.
3. ,, ,, + *u̯*.
4. ,, ,, + *r*.
5. ,, ,, + *l*.
6. ,, ,, + *n*.
7. ,, ,, + *m*.

B. Long-vowel series:

IV. *ē*-series. V. *ā*-series. VI. *ō*-series.

Each of these may have the following sub-varieties:[3]

1. The vowel by itself.
2. The vowel + *i̯*.
3. ,, ,, + *u̯*.

---

[1] Only two nasals need be considered.

[2] The varieties of the *e*-series are the most important as well as most numerous.

[3] With long-vowel series the seven sub-varieties are theoretically possible.but the three mentioned here are practically the only ones found. Rarely are forms found for the others.

In each of these there are the three steps or grades: *weak*, *strong*, and *lengthened*. The weak-grade, as we saw above (§136), is subdivided into two: (a), *weak-grade* having the secondary accent and (b), *weak-grade* without any accent. In the other two grades we get besides the original vowel also the ablaut (i.e., qualitatively-changed) vowel. Thus we get in each series the following six varieties in the vowel-gradations table:

1. Weak-grade: (a) with secondary accent.
   (b) with ablaut vowel.
2. Strong-grade: (a) with original vowel.
   (b) with ablaut vowel.
3. Lengthened-grade: (a) with original vowel.
   (b) accentless.

Of course, when the original vowel is long, the last two (3a and 3b) would be absent; and, when the original vowel is *o*, the ablaut grades (2b and 3b) would be wanting. Another point to be noted is that if tables are made of all these various series and if examples are sought for each of the varieties we would have to get them not from one but from several cognate languages. And even then one root may not be able to give examples to fill in all the six columns.

§ *139. Vowel-gradation in Sanskrit*

In Sanskrit the six series of the I.-E. are reduced to only two, the अ series and the आ series. And we get the following varieties:—

I. अ-series: 1. अ [अ]
2. अय्, ए [इ or ई]
3. अव्, ओ [उ or ऊ]
4. अर् [ऋ]
5. अल् [ऌ]
6. अन् [अन्]
7. अम् [अम्]

II. आ-series: 1. आ [आ]
2. आय्, ए [ई]
3. आव्, औ [ऊ]

The details are given in Table V.

In view of what has been said above with regard to the different points of view from which Sanskrit grammarians and Western philologists have looked at vowel gradation, it will be clear that the series shown in the table are from the standpoint of modern Linguistics. To make the position clear the root-vowels given by Sanskrit grammarians are also shown enclosed in square brackets. The table should make the matter quite clear. It may be repeated, that in the table the 'ablaut' columns are absent. The remarks give the necessary explanations.

CHAPTER IX

FORM-BUILDING AND WORD-BUILDING

§ 140. *Parts of Speech*

Pāṇini has made a clear differentiation between the terms *śabda* and *pada* in his *sūtra* सुप्तिङन्तं पदम् (i. 4. 14). *Śabda* in Sanskrit means the word, i.e., the label attached to a concept, while *pada* is the *śabda* used in a sentence.[1] Thus *pada* is *śabda* plus the grammatical suffixes. Of course in languages of the isolating type these two are identical. In these languages the word denotes the root-concept, and the part of speech to which it belongs is usually seen from the context, i.e., from its position in the sentence. Very similar is the case with languages of the other two types when they have reached the analytic stage. In short there is nothing inherent in the *śabda* (or the root-concept) which could determine its part of speech. Thus take a word like " mother ", the word could be used as a verb, as in the sentence, " the cat *mothered* the helpless puppies ". There is also the famous " *but* me no *buts*, *but* tell me the whole truth, I want nothing *but* that ", where we find the word " but " used as four different " parts of speech ".

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[1] See my article on " Pāṇini's ' Parts of Speech ' " in the *Calcutta Review*, July, 1927. In English we may call *śabda* the " root-concept " and *pada* the " grammatical form " (the word as actually used in a sentence).

§ 141. *All words are not root-concepts*

Somehow we have got the idea that words (concepts) are to be divided into the few categories of grammar which we call "parts of speech" We need not here enter into the merits of the classification of these as found in our English grammars. In a fundamental sense it is indeed true that there is nothing inherent in the root-concept which determines the part of speech. But we find this dictum strictly true only in the case of isolating languages. Usually, however, in our inflected languages we are correct in assigning most words in our lexicons to their appropriate parts of speech. The reason for this is that a very large number of the "words" in our languages are *not* root-concepts. They are derivatives from the root-concepts made up by adding to them certain formative affixes. Thus the lexicons of languages of the inflected type have two classes of words: (1) the root-concepts and (2) the derivatives from these. The latter are numerically by far the most numerous.[1] In the isolating languages, on the other hand, the lexicons have words which are only concepts, either root-concepts or derived-*concepts*, and the latter are necessarily not very numerous.[2]

§ 142. *Roots and their derivatives*

The main characteristic of inflected languages is that they can be analysed down to *roots*, which are the fundamental concepts and from which all their wealth of words is gradually built up. These roots are originally material concepts, usually indicating activities of the human body.[1] With the progress of the race and the development of their thought these material concepts gradually give rise to abstract concepts and new concepts are built up by fresh regroupings. The very fact that these derivatives are denoted by certain definite suffixes and prefixes gives a sort of clue to the re-arrangement of the groups. It is also very probable that these suffixes and prefixes were originally themselves concepts, i.e., independent words which combining with the others gave a new compound concept. Phonetic decay may have been responsible for the reduction of these into merely monosyllabic suffixes and prefixes.[2] With further progress in the language the derived words themselves are further developed into still other concepts by means of other suffixes. Thus we get two types of word-building suffixes in the Indo-European type of inflected languages. These are (i) the *Primary* (कृत्), which are added direct to the root and (ii) the *Secondary* (तद्धित) which are added to forms already derived.

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[1] In Sanskrit there are only about 800 root-concepts out of which many thousands of words are built up.

[2] This explains why the biggest Chinese dictionary has only 42,000 words, as compared with, say, the *St. Petersburg Dictionary* (of Sanskrit) or the *New English Dictionary* which contains a far larger number.

§ 143. *The elements building up Indo-European languages*

Thus we see that the inflected languages with which we are concerned are made up from a limited number of *root-concepts*. From these are derived the primary derivatives and from these latter the secondary derivatives by adding the primary (*kṛt*) and the secondary (*taddhita*) suffixes. Both these belong to the *word-building* elements

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[1] See § 10 above.

[2] This seems somewhat contradictory to what has been stated above in § 35. But the remarks made there apply to *grammatical* suffixes only. This point is made clear further on.

Sentence—the **Unit** of Language—is made up of →	→ **Grammatical Forms** (*pada*). These are :		
	1. Substantives (*subanta*), including : (a) Nouns, (b) Pronouns, (c) Adjectives (d) Verbal forms, viz., (i) Infinitives, (ii) Participles. These are formed by adding *sup*-endings to →	→ **Words** (*śabda*), or → ↑ These are : 1. Simple, i e., →	→ **Roots** (*dhātu*). → ↑
	2. Indeclinables (*avyaya*), including : (a) Ad-nouns (Prepositions) (b) Ad-verbs, (c) Conjunctions, (d) Exclamatory particles (Interjections). These are : (i) mostly unchanged, → → or (ii) formed by adding *sup* (or other adverbial) endings to → →	2. Derivatives, which are : (a) Primary, formed by adding Primary or *kṛt*-ending to → (b) Secondary, formed by adding Secondary or *taddhita*-endings to Primary words. →	→ →
	3. Verbs (*tiṅanta*), which are formed *tiṅ*-endings, together with the other needed modificatory signs, to → →	↑ 3. Compounds (*samāsa*), which are : (a) Prefixes (*upasarga*) plus → (b) Word plus Words (c) Words plus →	→ ↑ →

Table VI.—Sentence To Roots.

[Facing § 148.]

of the language. But we have seen already that for the building up of sentences (the units of language) words (whether root-words or derivatives) are put together and their mutual relations are indicated by means of other suffixes which may be called " grammatical-suffixes ".[1] These last may be called the *form-building* elements. These make up the original syntactical apparatus of these languages and form part of their original inheritance. These have not been added to in any of the branches.[2] Many of the word-building suffixes also are parts of the original inheritance and some of them (such as the adverbial suffixes) are closely connected with the grammatical ones.[3] But many new word-building suffixes have been of later growth in individual branches of I.-E. languages which are unknown to the other branches. Examples of these latter are *-hood*, *-dom*, *-ly* in English These varied elements can be arranged in a tabular form as in Table VII.

§ *144. Various kinds of Indo-European affixes*

It can be seen quite clearly that the sentence may be analysed, in the first instance, into a number of grammatical forms (*pada*). These latter in their turn can be seen as made up of a word (or root) plus one or more grammatical (form-building) suffixes.[4] Words (*śabda*)

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[1] See Table VI. There are no grammatical *prefixes* in I.-E. languages. See above, § 25.

[2] New grammatical forms have, indeed, arisen in individual languages but they have been *periphrastic* in origin, like the future forms (कर्तास्मि) and the periphrastic perfect (कारयामास) etc., in Sanskrit.

[3] Such as -तः (found in यतः, कुतः etc.) which is clearly connected with the suffix of the ablative case.

[4] In the I.-E. languages there are no grammatical prefixes. The augment अ of verbs is not so much grammatical as modificatory.

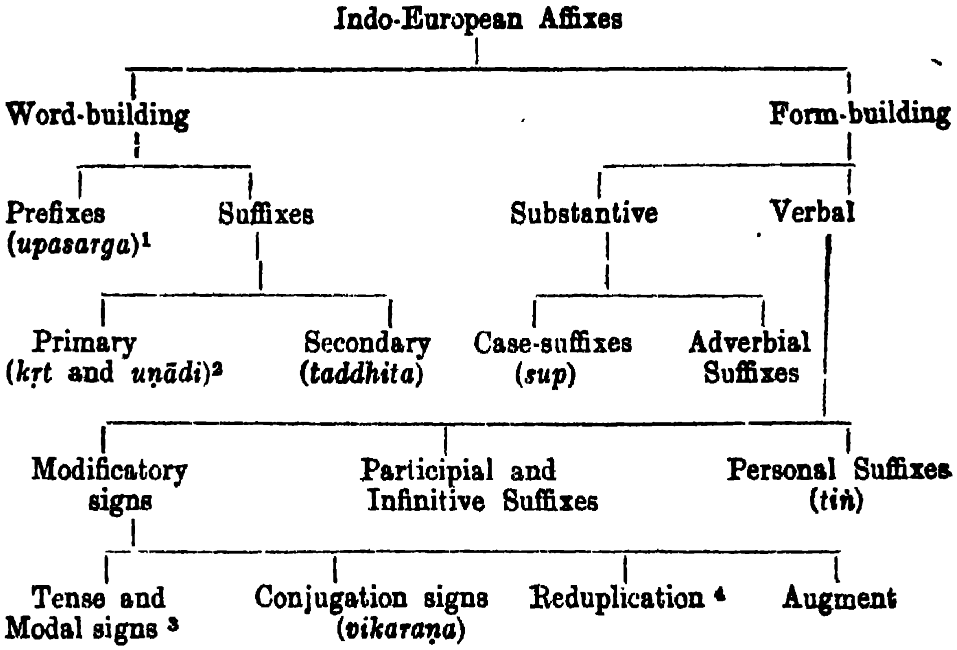

TABLE VII.—INDO-EUROPEAN AFFIXES

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[1] The negative prefix (*a-* or *an-*) is included here.

[2] See Whitney, *Sanskrit Grammar*, § 1138 a.

[3] Such as those for passive, future, causal, etc.

[4] As a modificatory device it is found in intensive, perfect, etc.

[Facing § 144.]

themselves can be analysed and these are found to be built up from roots with the addition of word-building affixes. Thus the ultimate analysis of the I.-E. languages yields roots and various kinds of affixes. The varieties of the latter are shown in Table VII.

§ *145. Word-building affixes: (i) Prefixes*

Words are built up from roots by prefixes and suffixes and of the latter there are two varieties. The prefixes in I.-E. have no *grammatical* significance but they modify the *sense*. In other words they give a compound-concept. They are employed both with substantives and with verbs. They are in essence small words indicating very abstract concepts such as arise after a good deal of mental development and progress. These little words are attachable to nouns (ad-nouns, prepositions [1]) or to verbs (ad-verbs). In Sanskrit they are all grouped together under the common designation of *upasarga*. It is, indeed, hard in the ancient I.-E. languages to know whether in a sentence these are attached more to the noun or to the verb. Besides the *upasarga* there are several other prefixes which are also found in the Indo-European languages. The most important of these is the negative prefix, in Sanskrit, अ or अन्.

§ *146. Word-building affixes: (ii) Primary and Secondary suffixes*

The other group of word-building affixes are the primary and secondary suffixes from which words are derived from roots. The prefixes are more or less used to form compound-concepts, i.e., their own significance is added on to the meaning of the word or root to which they are attached. The primary and secondary suffixes, on the other hand, are added to derive a *new* concept from a root or word. Primary suffixes are added to the root directly, while secondary suffixes are added to words which have been already derived. These are, as may be expected, different in different languages; still a considerable number form the original common stock of the parent-language, especially among the primary suffixes. These derivative suffixes build up the feminines, the degrees of comparison for adjectives, the ordinal numerals, abstract nouns from concrete, agent nouns and a vast number of other words. In fact these constitute the most useful as well as the most instructive aids in the building up of language.

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[1] When attached to nouns they usually stand *before* these hence the name. Sometimes they are used as *post*-positions.

§ *147. Form-building suffixes*: (*i*) *Substantive-suffixes*

In the Indo-European languages there are no grammatical or form-building *prefixes* as in the Semitic languages. There are suffixes of essentially two kinds only, substantive and verbal. The adverbial suffixes have originally the same signification as the case-suffixes. " There is no ultimate difference between such suffixes and the case-endings in declension; and the adverbs of this division (i.e., derivative adverbs) sometimes are used in the manner of cases ".[1] This close connection between case-endings and adverbial suffixes may have been due to the latter being variant forms of the former. In Sanskrit such adverbs are often used as cases, e.g., तस्मान्मृततः (from that dead body); यत्र काले (at the time when), पथो देवत्रा यानान् (paths leading to the Gods), कुतश्चिद्देशात् (from some country). Then again many of the modificatory words (*avyayas*) in Sanskrit are actually case forms of nouns, e.g., चिरात्, सहसा, शनैः, सकाशात्, प्राह्णे, रहसि etc. Hence Pāṇini has very rightly classified these words as a variety of substantives, and he says that the *avyaya* is in essence a *sub-anta.*[1]

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[1] Whitney, op. cit., § 1097 a. In Greek also there are " local endings " for forming adverbs, like *thi*, *-then*, *-de* etc. The words thus formed are used exactly as cases of nouns, e.g., *oiko-then* (from home), *bīēthi* (with violence).

§ *148. Form-building suffixes*: (*ii*) *Verbal suffixes*

Verbal suffixes are of two sorts: (*a*) personal endings and (*b*) modificatory suffixes. The former are called the *tiṅ*-suffixes in Sanskrit grammar. These endings are common to all branches of the I.-E. languages. The modificatory suffixes are of various sorts. In the first place they denote certain tenses and moods. Thus there is the *-ya* for passive, *-sya* for future, *-aya* for causal, *-sa* (or *-iṣa*) for desiderative, and so forth. There is another type of modificatory suffix, usually called *vikaraṇa* by Sanskrit grammarians. These are found in Sanskrit mainly in the " Present " and the " Aorist " systems. These are called the "conjugation-signs ", specially with reference to the " Present " system. In that system are found the ten " classes " of roots, each distinguished by a particular sign. The roots in classical Sanskrit are usually conjugated in one class only. Sometimes there are roots which belong to more classes than one, and occasionally the meaning also changes with the change of class.[2] In the aorist, too, similar classes are observed.

Comparing these *vikaraṇas*, with similar modificatory signs in the other I.-E. languages some remarkable points are noticed. The parent I.-E. language seems to have possessed no less than thirty-two such signs as enumerated by Brugmann. Originally they did have a modificatory meaning based on delicate shades of meaning. Thus the root *yu* (to join), gave a derivative *yu-dh* (to join in battle) while the Latin *jungo* shows another conjugation-sign.[1] The -*skō*-class roots in Greek (-*scō* in Latin) show another type of *vikaraṇa*.[2] In all I.-E. languages these classes have mixed up more or less according as the original distinctions based on percept differences became regrouped under different concepts. In Sanskrit most of the *vikaraṇas* fell together in the first or *bhū*-class. In the Veda we often find verbs conjugated in quite different classes to what they have acquired later, and often we have the same root conjugated in different classes with distinct shades of meaning.[3]

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[1] Cf. Pāṇini, ii, 4.82 etc.

[2] E.g., पच्, नश्, कुप् etc.

§ 149. *The Augment*

The augment is the only *prefix* for form-building in the I.-E. languages. The original use of this sign was to indicate past time. And in the *Ṛgveda*, as well as in Avesta and Homer, augmentless forms are pretty frequent. In fact, the use of the augment definitely denotes past time, and without the augment the sense is that conveyed by the "tense-system"[1] employed without any reference to time—past, present or future. In Greek, too, we often find in Homer the dropping of the augment making the passage vivid in "historical present".[2] In Avesta also the augment has a very clear temporal value and is used comparatively rarely. The greater majority of aorist forms in Avesta are augmentless. When the verb is accented in Sanskrit and if it is an augmented form, the accent is always on the augment. This rule seems clearly to support the view that the augment was a purely temporal prefix. In the aorist-system in the Vedic language the augment is often dropped giving the so-called "improper subjunctive".[3]

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[1] The arrangement of roots in the mnemonic verses given in Sanskrit grammars seems to have been originally arranged in alphabetical order of these *vikaraṇas*, because they are arranged in the order of the *final* letters of the roots, as in the well-known list, शक्लृ पच् मुचि रिच् वच् विच्। सिच् प्रच्छि त्यज् निजिर् भजः ॥ etc.

[2] This is the छ् in Skt. roots like गच्छ्, etc.

[3] In Greek "the various forms of present stem originally expressed different types of action. (1) Verbs in *io* (-*ō*) expressed *continuous* action, e.g., cf. *phorō* (wear) with *phérō* (carry), *potôma* (hover) with *pétomai* (fly); (2) reduplication expressed *repeated* action, *dídōmi* (offer), or *intensive* action, cf. *pamphainō* (shine brightly) and *phainō* (shine); (3) suffix -*skō* was *terminative*, denoting the beginning or end of an action and in many verbs became inceptive, e.g., *gēráskō* (become old), *hēbáskō* (to come to man's estate), *gegeidskō* (to get a beard, to come of age)" (John Thompson, *Greek Grammar*, § 280, note 3).

§ *150. Reduplication*

One of the methods employed in distinguishing certain "classes" and some of the "tenses" in the I.-E. languages is reduplication. The original sense attached to reduplication is repetition. In some languages the plural is indicated by reduplication as in Japanese and Malay. With verbs reduplication conveys the idea of an oft-repeated or habitual action, or an action performed intensively. Sanskrit has got intensives which have a strong reduplication.[1] Very likely the reduplicated (हु) class in Sanskrit indicated a habit. In Greek and Latin verbs reduplication indicated repeated or intensive action.[2] There is another use of reduplication also found in Sanskrit and in the modern vernaculars of India; these are the so-called reduplicated compounds, e.g., केशाकेशि, हस्ताहस्ति, etc., and they show quite clearly the reason for the reduplication. In Latin pronouns may be reduplicated to indicate emphasis, for example, *mēmē*, *tētē* (rare), *sēsē* (very common).[3] Among the I.-E. languages reduplication as a grammatical device is also found in Old Irish and Gothic.

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[1] In the I.-E. languages four clear tense-systems are found. Grammarians have called them (*i*) Present, (*ii*) Perfect, (*iii*) Aorist and (*iv*) Future. But these names are misleading because these words have now acquired clearly-marked time connotations. ***The time element is entirely absent*** in the older phases of the languages; it is only a particular set of personal endings and *vikaraṇas* and other modificatory signs that determined these forms. In Sanskrit these four "tense-systems" are represented respectively by (*i*) गच्छति, (*ii*) जगाम, (*iii*) अगमत् and (*iv*) गमिष्यति.

[2] Cf. *Iliad*, A, line 10.

[3] Whitney (op. cit., §§ 583-587) gives the proportions of the augmentless forms to the augmented in the *ṚV*. as 2,000 to 8,300. The augmentless aorist survives in classical Sanskrit with the prohibitive particle मा.

§ 151. *Compound-words*[4]

Besides the word-building devices described above[5] the Indo-European languages possess a very remarkable feature, the power of building compound-words. Other families of languages also often show two words put together, but this is mere juxtaposition, the relations between the words thus joined being the simplest, usually that of possessor and thing possessed. Thus in Hebrew there are so-called compounds like *bethel* (the house of God), *Benjamin* (the son of

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[1] These used to be called "frequentatives" in older grammars.

[2] See above, p. 187, fn. 3.

[3] George M. Lane, *A Latin Grammar*, § 650.

[4] See my article, "A note on Sanskrit Compounds," in the *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III, 2. pp. 449 ff.

[5] §§ 145 and 146.

Jamin), etc. But in the I.-E. languages other and more complex syntax relations are also indicated by compounds. These are true compounds as distinguished from mere juxtaposition as observed in other languages. In fact compounds in Indo-European languages almost serve the purpose of parenthetical clauses.

In the older I.-E. languages these consist usually of two words. The compound does not denote merely the sum of the two concepts, but *one concept*, which is a sort of resultant of the two taken together. That the compound denotes one concept is seen from the fact that it has only one accent. In Veda we get the *devatā-dvandva* compounds which show *two* accents, because obviously these compounds indicate two ideas. In fact the two members of a *devatā-dvandva* are quite loosely joined together and each of them is in the dual, e.g., *indrāsómā*, and in the oblique cases *mitrávárunayoḥ*.[1] Except for these *devatā-dvandva* compounds all others express only *one* concept and hence also have one accent.

In all the earlier Indo-European languages it is rare to find a compound of more than two members. They are mostly descriptive in their signification. But as we come to more recent times it is noted that the size of compounds increases. In Greek long compounds are not usual and when used are more or less literary curiosities.[2] But in Sanskrit the compound has had a remarkable development and in later Classical Sanskrit they form the usual method of expression.

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[1] *Mitráyor-váruṇāyoḥ* is also found in *ṚV*. vii 66.1 (and alsi vi. 51.1). This sort of compound, where each member is separately declined, is very common in the Avesta, e.g., *Ahunəm-vairīm*, *Vaŋhəuš-Manaŋhō*, *Ašahe-Vahištahe*, etc.

[2] See below, Chap. XII (§ 2(9).

In present-day English we find compounds, sometimes fairly long, in which the words are joined together by hyphens. These compounds are mainly adjectival in force. As examples may be cited: " never-to-be-forgotten episode ", " sort of end-of-a perfect-day feeling ". Such compounds are to be found in humorous writers. Their meaning is quite plain to the reader. A couple of further examples may be given:

" A sermon nowadays should be a bright, brisk, straight-from-the-shoulder affair." [1]

" There is a sort of Oh-what-a-wicked-world-this-is-and-how-I-wish-I-could-do-something-to-make-it-better-and-nobler expression about Montmorency, that has been known to bring the tears into the eyes of pious old ladies and gentlemen." [2]

§ 152. *Compounds in Classical Sanskrit*

Sanskrit is now a " dead language ", and it died as a result of Pāṇini's Grammar.[3] What is implied by this statement is that the other spoken languages of India progressed along their usual course, and showed clear signs of a growing analytic structure, such as the greater use of prepositions or postpositions [4] and of auxiliary verbs, but Sanskrit remained as synthetic as it was in the days of Pāṇini. But Sanskrit, though " dead " as far as the masses are concerned, has remained a spoken language to this day. And even though its speakers form a " microscopic minority " today, they formed a considerable portion of the people in the days when the later literature was produced. Sanskrit was certainly "dead" in the sense that soon after Pāṇini's date it ceased to be the language of the home—"the mother-tongue".[1] So though later writers like Bhavabhūti and Māgha, Bāṇa and Daṇḍin, wrote Sanskrit with fluency and grace, still they must have used the more analytic Prakrit very largely in their daily life. No human being could have thought in the stilted artificial manner of these great Classics.

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[1] P. G. Wodehouse, *Jeeves Omnibus.*

[2] Jerome K. Jerome, *Three Men in a Boat.*

[3] See below, Chap. XIV (§ 267).

[4] The so-called " case-endings " in the modern Indian Vernaculars are in their origin postpositions.

The terribly long compounds so common in Classical Sanskrit Literature form a very remarkable proof of the natural urge of all languages from synthetic to analytic structure. For these long compounds are not mere descriptive words but whole sentences. Luckily there was no rule in Pāṇini restricting the *number* of words a compound may contain and therefore the natural linguistic tendency towards analytic structure blossomed forth in Sanskrit in this wondrous manner. Compounds enable us to dispense with grammatical endings and these long compounds are merely the attempts in Sanskrit at analytic construction. These compounds indicate the direction in which Sanskrit might have developed if Pāṇini had not written his *Aṣṭādhyāyī*. Only in that case we would have written the words separately.

In Welsh such long compounds also exist, as also in German. Both these languages are still largely synthetic in structure and here, too, the long compounds are mere expressions of the tendency towards analytic structure. Mark Twain in his book, *A Tramp Abroad*, describing the long German compounds (in the chapter entitled "The awful German Language") has very aptly called them "alphabetical processions". He says, "some German words are so long that they have a perspective . . . . These things are not words, they are alphabetical processions. And they are not rare; one can open a German newspaper any time and see them marching majestically across the page—and if he has any imagination he can see the banners and hear the music, too. They impart a martial thrill to the meanest subject ". In one edition of this book there is a quaint picture of this " alphabetical procession " marching over a bridge and fading away in the distant horizon!

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[1] The true implication of this name—*mother-tongue*—is that the child learns speaking from the mother.

CHAPTER X

LINGUISTIC PALAEONTOLOGY

§ 153. *The Method of Linguistic Palaeontology*

Urgeschichte or *Linguistic Palaeontology* is the name given to that branch of Linguistics which strives to reconstruct ancient history from linguistic evidence. It would be better to call it at once " pre-history ",[1] because the period to which these investigations carry us is much beyond what history has recorded. And naturally there would be a separate set of facts for each " family " of languages. Here, of course, we shall consider Indo-European Urgeschichte. The usual method followed in this reconstruction is to get hold of the oldest records in each branch of the Indo-European languages and from a careful and critical comparison of the words certain common heritage is discoverable. This would give us a fair notion of the wealth of words the original speakers of these languages possessed and thus we may get some idea of their culture and progress.

§ 154. *Precautions to be observed*

This branch of Linguistics is more or less of recent growth, though the foundations of this fascinating subject were laid long ago by Max Müller. Still it is comparatively recently that scholars have started devoting themselves seriously to it. These have worked very assiduously and carefully and the most noted among them was Professor O. Schrader of the University of Breslau. The methods along which these scholars have worked are typical of the extremely careful and critical attitude of modern Linguistics. Certain precautions [1] are strictly to be observed and these may be enumerated and considered in some detail. These precautions are:—

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[1] *Urgeschichte* means " pre-history ".

(*i*) The presence of a word in several branches of the Indo-European family is not conclusive of its right to a place in the parent vocabulary.

(*ii*) The absence of a word from several branches is not conclusive evidence against its being included in the parent language.

(*iii*) Absence of a common name for a very common object or idea would not mean non-acquaintance with that object.

(*iv*) That a word is not found in the known records of particular branches is no proof that they never possessed the word.

(*v*) Semantic change has to be always carefully borne in mind and taken into account.

(*vi*) From the undoubted existence of a word in the parent language no hasty conclusions need be drawn regarding the culture of the original speakers.

(*vii*) The existence of a word in the parent vocabulary merely proves familiarity with the object, that it was sufficiently important to be worth naming. But the degree of familiarity is to be ascertained from other considerations.

§ *155. (i) Presence of a word in several branches*

It is obvious that a word is regarded to belong to the original inheritance only if it is found in several branches.

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[1] See Moulton, *Science of Language*, pp. 30 ff.

Here, too, there is need to observe that if a word is common between two closely related branches (like, say, Indian and Iranian) but is not found in the others, the presumption is that it is *not* an original word, i.e., a word from the parent stock. In any case it would be unwise and not sufficiently warranted to regard it as such. In order that a word may be included in the original stock of Indo-European words it has to be found in several branches widely separated. The mutual relations of the branches have been roughly shown in Figure 16.

From this it will be quite clear that if a word is found in Greek and Sanskrit it can with greater probability be regarded as a word of the parent language than if it were found in Irish and Latin or Sanskrit and Avesta.

But even if a word is found in enough branches and in branches sufficiently separated from one another, there are still two further possibilities to be considered. The first is that the word may have been borrowed from one of the branches into the others. Such, for instance, is the word *rājā* borrowed in practically all the other branches of the Indo-European today. Many English words, like *sport*, *scout*, etc., are now used in other languages also. Of course these examples are of recent borrowings, but in older days Greek and Latin had given a lot of culture words to the other branches.[1] The second possibility is that the word may have been a borrowing from another family of languages. Very good instances are the words *camel* and *lion*, both of which, though found in almost all the branches,

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[1] A great many Latin words were borrowed in German languages early enough to have been affected by the Second Sound-shifting. Sanskrit also shows borrowing from other languages, e.g., मेला (ink), मेलान्धुक (ink-pot) are from Greek, लिपि (script) is from Old Persian.

are borrowings from Semitic.[1] So we may lay down the precaution that a word found in several widely separated branches of the Indo-European need not be taken to be an original word, until there is sure proof that there has been no borrowing.[2]

§ *156.* (*ii*) *Absence of a word in several branches*

It often happens that old words in a language tend to drop out, to be replaced by borrowed words from other languages or by some other synonym. Hence the absence of a word from one or more branches is not conclusive evidence against its inclusion in the parent vocabulary. Thus the Indo-European words for " son " and " daughter " have disappeared from Latin, that for " sister " from Greek and those for " father " and " mother " from Gothic. We note the same process of disappearance of ancient words in our modern languages. Thus *hound*, the original word, is now replaced in English by *dog*. In the Indian Vernaculars a great many indigenous words have disappeared and are replaced by English or other European words. Thus the words *lamp* and *lantern* have replaced the ancient दीपक and दीवा. And the number of Persian and Arabic words in Indian Vernaculars is much greater than is usually suspected; some of the most ordinary words used daily, and which have penetrated even to the village dialects, are Semitic words which have replaced the old Aryan words. Such words are *sāheb* (master), *jawāb* (answer), *jalsā* (assembly), *arz* (request), etc. These considerations only emphasise what has been noted above already that all borrowed words have to be carefully excluded.

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[1] Incidentally this proves that both these animals were not known to the Indo-European people (i.e., the people speaking these languages) until they came in contact with Semitic races. It may be worth noting here that the Irānī word for " lion "—*shīr* (or *sher*) has been borrowed in Sanskrit (शैरक) and in Chinese (*shīh*).

[2] Cf. the history of the word for " rice " which is found in all European languages, but is a borrowing from Dravidian; see p. 61 above.

§ *157.* (*iii*) *Absence of a common word for a common object or idea*

Often a very strange fact is noted with regard to Indo-European words. For no apparent reason one particular object or idea has no word in common; and though we are certain from other considerations that such a word did exist, the various branches show entirely different words. Thus we know that the Indo-European parent-speech had numerals up to one hundred,[1] and actually all numerals from " two " up to " hundred " are common to all the branches, still there is no common word for " one ". Similarly the word for " foot " is found in all branches but there is no common word for " hand ". " We can hardly infer that their physical and mental equipment was so deficient as the argument from silence would suggest in these cases ".[2]

§ *158.* (*iv*) *Absence of a word in particular branches*

As already mentioned in the beginning of this chapter we have necessarily to base all arguments upon the known writings in the various languages. But obviously these would not record every word that had been used in that language. With many languages, which are important from our point of view, the recorded literature is very meagre and scanty. Gothic and Old Irish and Old Iranian are certainly of great value in considering Urgeschichte, but their records are extremely meagre. In these cases the older forms are to be inferred from those found in later records. Even in the case of languages with extensive literatures, like Sanskrit and Greek, it is found that new manuscripts and new inscriptions always show a considerable number of new words. The publication of the *Kauṭilīya Arthaśāstra*, for instance, has brought to light a large number of new words, none of which had ever been noted in our dictionaries. And these new words throw a good deal of light on the culture and on the international contacts of those days. Similarly discoveries of new Greek papyri and inscriptions have also brought out many words, whose existence was unknown till that time. Some of these had been actually postulated by scholars as probable, and their discovery in old writings incidentally proved the accuracy of phonetic laws.

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[1] Possibly they could count even up to a thousand, but there is no certainty about this.

[2] Moulton, op. cit., p. 33.

§ 159. (v) Semantic change

Often words change their meaning in passing from one language to another in the process of borrowing. More often an original word, inherited by various branches, changes its meaning as people change their homes in the course of their migrations. This is specially to be noted in the case of names of plants and animals. If a plant or an animal existed in the original home, and was familiar enough to deserve a name, that name would probably be inherited by the various branches. When the people of these branches left their original home and wandered away they carried this word with them. But it was not always that the same plant or animal would be found in every land these people might visit. So naturally these names would be given to the plant or animal that had the closest resemblance to the original one. Thus Latin *fāgus* (beech), English *beech*, Greek *phēgós* (oak), Kurdish *bûs* (elm) are all varieties of the same original word.[1] So also Greek *drûs* (oak), Irish *dair* (pine or fir), Lithuanian *derwà* (pine-wood), Latin *larix* (larch), Sanskrit दारु (wood or pine-tree),[2] Avesta *dāuru* (wood), Old Slavic *druvo* (wood or tree), Gothic *triu* (tree) and English *tree* are all cognate.[3] A good example from among names of animals is the Sanskrit word उष्ट्र. The word originally meant " buffalo " or " bison ", but later on it came to mean a camel on account of the similarity of colour. The camel was so unknown to European nations that in Gothic and in Old Slavic the words used for it were cognate with the name *elephant*! In Gothic the word was *ulbandus* and in Old Slavic *velĭbądŭ*.[4]

Owing to semantic change cognate words often indicate different but connected ideas. Thus Sanskrit गिरि (mountain), Lithuanian *gìre* (forest) and Old Prussian *garian* (tree) are cognate and the ideas are all obviously connected. Another interesting series of cognate words is seen in Latin *quercus* (oak),[5] Old High German *forha* (pine), Sanskrit पर्कटि (*ficus religiosa*) [6]; and Lithuanian *perkúnas* (thunder) and Sanskrit पर्जन्य (Rain-god). All these words are cognate and the connection of ideas is apparent when it is remembered that the oak tree is regarded as specially sacred to the God of Thunder, with whom " thunder " and " rain " are obviously connected.

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[1] Schrader, *Reallexikon der indogermanischen Altertumskunde*^{2}, I, pp. 170 ff. (under " Buche ").

[2] As in देवदारु

[3] Schrader, op. cit., I, pp. 225 f. (under " Eiche ", §2).

[4] Schrader, op. cit., I, p. 555 (under " Kamel ").

[5] Walde, *Lateinisches etymologisches Wörterbuch*^{2}, pp. 632 f. (under " quercus ").

[6] The *Pipal*-tree.

§ *160.* (*vi*) *No hasty conclusions need be drawn from single words*

Even after the existence of a word in the parent vocabulary has been established beyond any doubt, there must be a curb set upon imagination running riot. Max Müller in the early days drew an idyllic picture of an Indo-European home in primitive times when the brother (भ्राता) was the person who " carried " the younger children of the family and the daughter was the " little milk maid " (दुहिता) of the house![1] This is an excellent precaution very badly needed especially in India today. In matters of scientific research it is safer to understate than to overstate a conclusion.

§ *161.* (*vii*) *The degree of familiarity with an object should be determined from various other considerations*

The existence of a single word merely proves familiarity with an object, a familiarity sufficiently close to warrant a special name. From a single word it is not safe to draw conclusions, but several words indicating connected ideas may be put together and definite conclusions may be drawn therefrom regarding conditions of life in that remote period. From the mere existence of a word for " horse " in the parent language we are not warranted in drawing any other conclusion except that it was known and was useful to man before the branches separated. But if, in addition, we also find common words for "riding", "chariot", "racing" etc., we would be thoroughly justified in concluding that the horse had been tamed and utilised in various ways such as drawing chariots, racing etc. Similarly we conclude that different grains were known and that agriculture was practised and ploughs yoked to oxen were used. The use of metals and of various weapons and ornaments is also inferred in a similar manner.

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[1] Max Müller's father, Wilhelm Müller, was a well-known German poet and so the great linguist had also inherited a poetic strain.

§ 162. *Linguistic Palaeontology demands a knowledge of many and varied subjects*

Bearing the above precautions in mind scholars have worked on Linguistic Palaeontology. This branch of linguistics, above all, needs a good deal of help from other sciences. Anthropology and archæology are needed first of all. A good deal of geology, especially of the quarternary period, is also needed. Connected with this a knowledge of the distribution and migrations of plants and animals is needed. Also a knowledge of local changes in the distribution of land and water in particular regions, since the advent of humanity on earth, is very necessary as indicating lines of migration of the various tribes. It is not possible, in these days of specialised studies, for a single person to gain expert knowledge in all these branches, but a student of Linguistic Palaeontology should possess a fair acquaintance with modern anthropological research. In short, the student of Linguistic Palaeontology has to gather a great deal of varied knowledge from experts and has to re-arrange it from the linguistic point of view.

There must necessarily be a difference between the view-points of students of anthropology and those of linguistics. The former tend to think in terms of various races and of cephalic indexes. But while admiring the scientific precision of modern ethnology, the students of linguistics know that language constitutes a bond of union between human beings far stronger than possession of a similarly shaped head or nose. And consequently the point of view of students of linguistics must be essentially different.

§ 163. The Homeland of the Indo-Europeans

The most fascinating problem in Linguistic Palaeontology is the determination of whence the Indo-European languages originated. The number of theories started about this question is really surprising. First of all it was Max Müller who suggested that the homeland of the Indo-Europeans [1] was in the Pamir tableland and the adjoining regions of Central Asia. This suggestion was accepted for some years until Dr. Latham of Cambridge (a scholar of Scandinavian languages) suggested that Scandinavia was a more likely place. Later on some German scholars have contended for North Germany and Dr. P. Giles of Cambridge [2] for Hungary as the original home Another opinion favours the region of Lithuania and the neighbouring districts of Poland. The discovery of the Hittite Inscriptions containing the names of Vedic divinities has led several people to suggest the upper reaches of the

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[1] It should be always remembered that throughout this book the name " Indo-Europeans " has no racial or ethnological connotation. It is used to designate merely " the people (of whatever race or country) who spoke or speak the I.-E. languages."

[2] He was my own *guru* and initiator in the science of Linguistics and it is to him in the first place that I owe my knowledge of and training in the subject. He has developed this theory of the I.-E. homeland in the *Cambridge History of India*, Vol. I, Chapter III.

Euphrates and the Tigris as the homeland. Several Indian scholars, deeply versed in Sanskrit, have ventured to suggest India, and Bal Gangadhar Tilak has suggested with very cogent arguments that the North Polar region was the ancient home.[1] The latest and most widely accepted opinion, however, is that of Professor Schrader of Breslau, who places the home in the region about the mouths of the Volga and the northern shores of the Caspian sea.

In all these opinions, except that of Tilak, there is one remarkable feature in common. And it is this, that the region in which the homeland is placed depends on the language or languages through which this question is approached.[2] Each different homeland was arrived at by reason of the languages with which the scholar was best acquainted. In any case, it must be admitted that Professor Schrader's work is full of an enormous wealth of detail and his case is extremely well presented, and so his is deservedly the generally accepted opinion today.

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[1] Tilak's arguments are quite sound in the main and he develops them with great skill. Unfortunately he had very little time during his very active political life to devote to these studies. In fact the only periods during which he could utilise his profound knowledge of the Vedas and kindred subjects for purposes of scholarly research, were those of enforced leisure as a political prisoner! His *Arctic Home in the Vedas* was produced during his second term of imprisonment. It was the large-hearted generosity of Max Müller (who admired his deep learning) that procured for him the necessary books in prison. It is a pity that there is a good deal of prejudice against Tilak and his writings owing to his *political* opinions.

[2] When I first read Professor Schrader's work—*Sprachvergleichung und Urgeschichte*—I was considerably struck by the fact that most of his arguments were based on Salvic languages and customs. I later discovered that he was Professor of Salvic languages. Later on I had the honour of meeting Professor Schrader personally, and in the course of conversation with him my impression in this matter was confirmed by the Professor himself.

§ *164. Changes of climate have been ignored in Linguistic Palaeontology*

One very important point is always lost sight of in all these discussions about the home of the Indo-Europeans. It is an accepted conclusion of geology that the distribution of sea and land *as a whole* has not varied much during the period humanity has dwelt upon earth. But in any given locality considerable variation of land and water has occurred even within historical times. For example the present climatic conditions of Central Asia make it impossible for any large population to live there. But a few thousand years ago the conditions were very different[1] and it was a land supporting a very large population. The science of climatology is just in its infancy and its help should be increasingly sought by students of Linguistic Palaeontology. So also the conditions in the far north just preceding the last ice-age have not yet been sufficiently worked out in detail, for the simple reason that it has not yet been possible to do so, but it is just likely that those lands had a very temperate climate then.[2]

§ *165. Other points ignored in Linguistic Palaeontology*

The impression created from modern works on the subject of Indo-European culture is that of a people living in an extremely " primitive " stage of culture. The whole of the research at present concerns only the *material* side—their acquaintance with certain plants, animals and metals, their knowledge of certain arts and crafts, their recognition of certain relationships in the family and in society. All this is meagre at best and leaves in our minds an impression of savages just emerging into an elementary stage of settled culture. This sort of impression is quite natural as long as we confine ourselves only to the material side of the question. And even with regard to material culture we can get but that part which happens to be preserved in words.

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[1] For details see the very illuminating book, *The Pulse of Asia*, by Ellsworth Huntingdon.

[2] See my article on "Legend of Yima and the Cradle-land of the Aryans" in the *Calcutta Review*, December, 1921.

But when we observe the structure of the original parent language, we are really struck with the cultural and mental development it implies. The wealth of verbal forms—the four " tense systems " each with five distinct conjugations (primary, secondary and three moods), the numerous derived conjugations, the subtle nuances of the *vikaraṇas*—all these show a mental development which far exceeds that of an ordinary savage. The development of prepositions and adverbs and the great variety of these also point to a higher development.[1] Then again nouns and pronouns show practically only two numbers [2] whereas savage idioms generally show four numbers—singular, dual, trial and plural—and they have besides a considerable variety of suffixes indicating plurality. In I.-E. languages the substantive endings are almost the same for all nouns. Many of the word-building suffixes indicate a power of appreciating purely abstract concepts. The most noteworthy evidence of the mental development of the Indo-

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[1] Many African languages lack prepositions (see Chap. XIII, § 238).

[2] The dual in the older I.-E. languages is confined only to the " natural pairs ".

Europeans is given by the numerals. They could certainly count up to a hundred, possibly up to a thousand. Experience among savage tribes, as well as with children, shows that the concept of number in the abstract arises after a considerable degree of mental growth. Savages can count concrete objects, like stones, boats, spears etc., up to several scores, but for *number in the abstract* many of the tribes cannot go beyond four.

In short, the whole grammatical structure of the I.-E. parent-language (as far as can be gathered from comparative grammar, and from the large number of prepositions and adverbs, as also from the numerals) shows very clearly that the Indo-European mind was far in advance of that of the ordinary savage who lives in Australia or in Central Africa. With all this evidence of grammar it would seem that in mental achievements and culture they were certainly well ahead of the savages today. This aspect of the question has not been touched at all as yet, but it is well worth investigation, for this would appreciably alter many notions regarding the Indo-Europeans which prevail at the present time.

CHAPTER XI

THE LANGUAGES OF INDIA [1]

§ 166. *The various language-families represented in India*

India [2] is a large country, almost a continent, and at first sight presents an amazing collection of languages and dialects. The population of this land is made up of several racial strata lying one over the other and we have a whole collection of Non-Indo-European Languages overlaid by the Indo-Aryan. The most important of the former are the Dravidian languages of South India. The other Non-I.-E. languages are mostly represented among aboriginal semi-civilised tribes. Very few of them possess written records and a great many of them do not possess even the rudiments of a literature. Among these languages, however, we find many a clue to words and phrases used among the modern Aryan languages. These last-named are obviously the most important among the languages of India besides the Dravidian, and many languages of both these families possess good literatures. Four " families " of languages are represented in India, viz., Austric, Tibeto-Chinese, Dravidian and Indo-European. There are besides a couple of languages which may be put down as " unclassified ".

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[1] For this chapter I am principally indebted to Sir G. A. Grierson's *Linguistic Survey of India*, Vol. I, part 1, " Introductory ". I have also derived considerable help from the " Introduction " to *The Origin and Development of the Bengali Language* by my friend Prof. S. K. Chatterji of Calcutta. I have not therefore given detailed references to either of these works.

[2] All through the word " India " means India and Pakistan.

§ *167. Austric languages in India*

Among the language-groups of the world the so-called Austronesian (or Malay-Polynesian) family[1] is an important one. This family is widespread throughout the whole width of the Pacific Ocean. This language family is closely connected with the Mon-Khmēr languages of Indo-China and with some of the most ancient among the aboriginal languages of India. These languages have been carefully investigated by Pater W. Schmidt, who put them together in one big family called the *Austric* family. Though the number of speakers of this family is not large, still the area covered is larger than that occupied by any other family of languages. West to East these extend from Madagascar to Easter Island and from north-west to south-east they extend from Northern Punjab to New Zealand. This family is subdivided as shown in Table VIII.

Of the Indonesian languages belonging to India we may mention Malay and Salon. Malay is spoken at the extreme southern limit of Burma where it approaches the Malay States. The latter (Salon) is the dialect of the seamen of the Mergui Archipelago.

§ *168. Mon-Khmēr and Khāsī*

The Mon-Khmēr people were at one time the rulers and conquerors of Indo-China. They had attained to a high level of culture, but now their languages are spoken by a few wild and aboriginal tribes in Siam, Burma and India. In Burma the Mon language is at present spoken round the Gulf of Martaban. Mon inscriptions of the 11th century have been discovered. The Khmēr languages

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[1] See Chap. XIII (§ 231).

- Austric Languages
  - Austronesian (Malay-Polynesian)[1]
    - Indonesian
      - Malay
      - Salon
    - Oceanean
  - Austro-Asiatic
    - Cham (South-eastern mixed group)
    - Proto-Malaccan group (Non-Malay peoples)
      - Semang
      - Semoi
    - Khāsī-Nicobar group
      - Khāsī
      - Nicobar
      - Salween
    - Mon-Khmēr group
      - Mon (Peguan)
      - Khmēr (Cambodian)
      - Moi dialects
      - Modern Malaccan
    - Muṇḍā (Kōl)
      - Eastern
        - Sāntālī
        - Muṇḍārī
        - Bhumij
        - Kodā
        - Ho
        - Korwā.
      - Western
        - Kūrkū
        - Kharia
        - Kanāwrī
        - Juāng
        - Śabara

TABLE VIII.—AUSTRIC LANGUAGES IN INDIA.

(Facing §167.)

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[1] See also Table XXXIII.

are also spoken in outlying portions of Burma and in Siam. Khmēr inscriptions go back to the first half of the 7th century. The language of the Nicobar Islands is also of the same family. All these languages are outside the limits of India proper. Closely connected with them is a language spoken in India proper. It is the language spoken in Khāsi Hills in Assam. Khāsī has had an independent development and for a considerable time has been out of direct touch with either Mon-Khmēr or other Austro-Asiatic languages. Hence it has now become very different outwardly. " Khāsi forms an island . . . . left untouched in the midst of an ocean of Tibeto-Burman languages ". But its vocabulary is very close to the Mon languages of Burma and its sentence construction is essentially Mon. " The various component parts are put in the same order, and the order of thought of the speaker is thus shown to be the same ".[1]

§ *169. Muṇḍā or Kōl Languages*

In Central India, beginning from West Bengal and stretching through Bihar and Madhya Pradesh and then south through Orissa into the Ganjam district of Andhra State, we find a group of closely associated dialects known by the name of Muṇḍā or Kōl.[2] This patch of Muṇḍā languages is interpenetrated by Dravidian dialects. Further west in the Madhya Pradesh there is another island of Muṇḍā languages. Here, too, it is surrounded by patches of Dravidian dialects. But the most remarkable extension of Muṇḍā languages is found along the Himalayan range, where we find small patches of it right up to the Simla hills. There it is known as the Kanāwrī dialect and there are probably other dialects further west. The two most important dialects are Sāntālī and Muṇḍārī. The Sabara dialect is interesting as being that of the *śabaras* (forest hunters)[1] who are also mentioned by Pliny and Ptolemy.

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[1] Both quotations are from Grierson, *Linguistic Survey of India*, I, 1, p. 33.

[2] Max Müller is responsible for the name *Muṇḍā*. The word *Kōl* is a native word in these languages themselves and means " man ". The word *kola* in Sanskrit means " pig " and very likely it is the same word applied as an opprobrious term to the aborigines, who are pre-eminently pig-breeders. Hence perhaps Grierson is right in choosing the term Muṇḍā rather than Kōl with its more offensive connotation.

§ *170. The influence of Muṇḍā languages on Indo-Aryan*

Grierson, following Pater W. Schmidt,[2] thinks that the Muṇḍā grammar bears the closest resemblance to Turkish. Its wonderful capacity for agglutination, by which "an enormous number of complex ideas can be formed according to the simplest rules", can be best appreciated by the fact that the conjugation of the verb *dai* (to strike) in the 3rd person singular alone occupies nearly a hundred pages in Mr. Skrefsrud's *Sāntalī Grammar.*[3] There are some very well-marked characteristics of Muṇḍā speech which have influenced other languages of India. The extremely complex conjugation of the verb in Behārī is certainly due to Muṇḍā influence. So also the use of compound participial adjectives instead of relative clauses which is a common feature of Indo-Aryan Languages, is shared by Muṇḍā languages as well. Another well-marked peculiarity in Muṇḍā is the double-plural of the pronoun of the first person—an "inclusive" (which includes the hearer) and an "exclusive" (which excludes the hearer). This is certainly taken over in many Aryan languages of India. Thus in Gujarātī अमे गया हता means "we (not including you) had gone," but आपणे गया हता means "we (and you) had gone." Another very important influence of Muṇḍā is found in the vigesimal system of numeration.[1] In fact the word for "a score" used in all Indo-Aryan languages —कुडी (*kuḍī*)—is a Muṇḍā word.

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[1] The Śabara dialect of Muṇḍā must not be confounded with the *Śābarī* Prakrit. This Muṇḍā dialect is mixed up with Dravidian.

[2] Pater Schmidt's book on the Austric Languages is named *Die Mon-Khmēr Völker, ein Bindeglied zwischen Völkern Zentralasiens und Austronesiens* (The Mon-Khmēr People, a connecting link between the peoples of Central Asia and Austronesia).

[3] Grierson, op. cit., p. 37. What follows is also from the same work.

§ *171. Tibeto-Chinese languages in India*

This family is called the *Tibeto-Chinese* family because these two represent the two extreme types among these languages. There are three main branches of this family—(i) Tibeto-Burman, (ii) Thai-Chinese (or Siamese-Chinese) and (iii) the Yenissi branch. Chinese itself is nowhere a vernacular in India, even though there are many thousand Chinese emigrants settled here. Of the Thai-Chinese branch a large number of dialects are found in Burma as well as in north-eastern parts of Assam. Of these the most important are Shān, Āhom and Khāmtī. Shān is spoken widely over Upper Burma. Āhom is an offshoot of the Shān. The Āhoms in 1228 A.D. entered the valley of the Brahmaputra where it emerges from the mountain barrier. To this land they gave their name, which was ultimately changed to the modern *Assam.*[1] These people left comparatively few traces of their domination on the Aryan Assamese. But they cultivated specially chronicles and historical diaries[2] and this has deeply influenced Assamese literature. In fact the Assamese word for "history" or "chronicle" (*burānjī*) is an Āhom word. The Khāmtī were another section of the Shāns who settled in Eastern Assam and ultimately ousted the Āhoms. The Khāmtī languages are the only ones of the Thai branch found in India today.

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[1] Among the Romance Languages French shows traces of the vigesimal system in words like *quatrevingts* etc., which was probably due to Celtic influence. In Welsh *ugain* is 20, *deugain* is 40, *triugain* is 60 and *pedwarugain* is 80.

§ 172. *Tibeto-Burman languages*

These are shown in Table IX. Tibetan proper (or *Bhōtiā* as it is often named in India) is a language with a very considerable literature. A great deal of this consists of translations from Sanskrit works on philosophy, Buddhism and kindred subjects and many of these are of great value for the cultural history of India, because the Sanskrit originals have been lost. These translations were made in the early centuries of the Christian era. The remaining languages of this group, except Burmese, are without any literature. The various branches are connected in a rather complex manner, which may throw a good deal of light on the migrations of the tribes speaking these languages.[3] It seems that the original home of these

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[1] *Āhom* itself is originally *Ā-shām* or *Ā-shān.*

[2] It was a sign of noble birth and good breeding with these people to record in detail contemporary events.

[3] See diagram given by Grierson at p. 54 of the *Linguistic Survey of India,* I_I 1.

- Tibeto-Chinese
  - Tibeto-Burman
    - Tibeto-Himalayan
      - Tibetan (or Bhōtiā)
      - Himalayan
        - Non-Pronominalised
          - Sunwār
          - Gurung
          - Magarī
          - Lepcha
            - Rong
            - Toto
        - Pronominalised
          - Kirantī
          - Dhimāl
    - North Assam
      - Aka
      - Daflā
      - Abor
    - Middle and South Assam
      - Bodo (or Bārā)
        - Bārā
        - Laking
        - Gāro
        - Tripurā
      - Nāgā-Bodo
      - Nāgā
      - Kachin (or Sing-pho)
      - Nāgā-Kuki
    - Arakan-Burma
      - Kuki-chin
        - Meithei
        - Lushei
      - Burmese
  - Thai-Chinese[1]
    - Northern Thai
      - Miao
      - Yao
      - Khāmtī
      - Nora
      - Tairong
      - Shān
      - Aitona
      - Āhom

TABLE IX. TIBETO-CHINESE LANGUAGES IN INDIA

(Facing § 172.)

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[1] See also Table XLV.

languages was in south-west China near the head-waters of the Yang-tsze-kiang and the Hwang-ho. From there they went down the courses of these two great rivers into China proper and down the Brahmaputra, the Chindwin, the Irawati, the Salwin, the Menan and the Mekhong into India, Burma, Siam and Annam. In all these lands they found older inhabitants, most probably the Mon-Khmĕr people. The original Tibeto-Burman stock seems to have reached the point where the Brahmaputra emerges from the mountains and there they split into three divisions. One followed the Brahmaputra upwards into Tibet, another followed the course of the same river downwards into Assam and the third branch followed the courses of the Chindwin and Irawati into Burma. The North Assam group is an amorphous collection of dialects which represent intermediate stages between Tibetan and Burmese. "Their territory is a kind of backwater over which various waves of Tibeto-Burman immigration have swept, each leaving its record in the speech of the inhabitants".[1]

§ *173. The Tibeto-Himalayan branch*

In many respects the most interesting languages of this group from the linguistic point of view are the Himalayan dialects. These separated out from the main Tibetan stock some time before the latter reached its present stage of development and they have had a history of their own. They were split up into a large number of dialects and, mixing with the older languages of these Himalayan valleys, they got changed to such a great extent from the main stock, that in some respects they developed traits the very opposite of the parent Tibeto-

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[1] Grierson, op. cit., p. 60.

Chinese groups. The chief of these newly developed traits are:

(i) A sharp distinction is made between animate and inanimate objects.[1]

(ii) Higher numbers are often counted by twenties and not by tens as in Chinese, Siamese, Tibetan etc.

(iii) Personal pronouns have dual and plural.

(iv) The first personal pronouns have "inclusive" as well as "exclusive" duals and plurals.

(v) In the verbal conjugation the person of the subject as well as of the object is denoted by the addition of suffixes.

Every one of these characteristic features of the Himalayan branch of these languages is "in entire disagreement with Tibeto-Burman, or even Tibeto-Chinese principles".[2] All these are the distinguishing characteristics of the Muṇḍā languages. These latter, as already noted, once spread all along the Himalayan valleys. There are, even today, "islands" of Muṇḍā speech as far away in the Himalayas as Simla and probably even further west. Near the western borders of Nepal and near the Sikkim-Nepal border, too, several Muṇḍā languages are found. "It, therefore, seems probable that Muṇḍā, or tribes speaking a language connected with those now in use among the Muṇḍā, have once lived in the Himalayas and have left their stamp on the dialects spoken there at the present day".[3]

These Himalayan Languages were first studied carefully by Hodgson who classified them into "non-pronominalized" and "pronominalized," which classification runs through them all. It is based on the last of the characteristics mentioned above, viz., suffixing the personal pronoun to the verb to denote not only the subject but also the direct and indirect objects.[1] The former (i.e., "non-pronominalized") are spoken in the eastern regions of Nepal and in Sikkim and Bhutan. The other group is found more among the central Himalayas. Of these non-pronominalized languages the most notable are the Rong (or Lepcha) and Sunwār. Rong is the language of Sikkim and it is the so-called "Bhotiā" heard in Darjeeling. Sunwār is to-day classed as non-pronominalized,[2] though Hodgson writing in 1847 put it down as very clearly pronominalized. From this it seems that the older languages of the Muṇḍā group are receding before the advancing tide of the Tibetan. In the eastern Himalayas, where there are easier passes to Tibet, the influx of Tibetan is easier and hence it is quite natural to find the languages there non-pronominalized. In the central parts the Himalayan languages are slowly changing from the pronominalized variety to the other type. In the western Himalayas the Ladakhī and Baltī dialects are pure Tibetan.

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[1] The Law of Polarity; it is discussed below, Chap. XIII, § 241.

[2] Sten Konow in *LSI.*, iii, 1, p. 179 (quoted by Grierson, op. cit., p. 56).

[3] Sten Konow, loc. cit.

§ 174. *The Assam and Burma branches*

The various languages of these branches have also been indicated in Table IX (p. 215). Of these the Bodo and Nāgā languages are closely connected with the Himalayan branch. The Kukī-Chin and Burmese are more or less independent types while the rest are intermediate in character.

The area of the Bodo language is almost completely aryanised and consequently these languages are fast disappearing. The Nāgā languages are numerous and they have a surprising variety of dialects. The country is very mountainous and the people very fierce, and these two reasons have caused a great diversity of speech in this region. "Where communication is so difficult, intercourse with neighbouring tribes is rare, and, in former times, when heads were collected as eagerly as philatelists collect stamps and no girl would marry a young fellow who could not display an adequate store of specimens, if a meeting with a stranger did take place, the conversation was sure to be more or less one-sided. Under such circumstances, monosyllabic languages, such as those of the Nāgās, with no literature, with a floating pronunciation, with a system of taboo which is ever and anon prohibiting the further use of certain words, and with a number of loosely used prefixes and suffixes to supply the ordinary needs of grammar, are bound to change very rapidly and quite independently of each other".[1] The Kukī-Chin group is remarkable in possessing a language, the Meithei, which has got literary remains in the shape of chronicles of Manipur State going back to 1432 A.D. This ancient language has helped a good deal in clearing the history of modern Meithei, and incidentally it proves how rapidly and how completely monosyllabic languages can change. One remarkable characteristic of the Kukī-Chin group is the entire want of finite verbal forms. Verbal nouns, participles and other sorts of periphrases are used.

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[1] E.g., the form *hiptung* in Limbu (a Himalayan dialect) is made up of *hip* (to strike), *-tū* (him) and *-ng* (I), and therefore means "I strike him" (*Linguistic Survey of India*, I, 1, p. 57).

[2] By Sten Konow in Vol. iii of the *Linguistic Survey of India.*

Burma languages are really numerous dialects, but there is a standard literary dialect—Burmese, whose literature has been much influenced by Pali. There are great variations in pronunciation between this literary dialect and the vernacular of the home.

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[1] Grierson, op. cit., p. 59.

Among the Northern Thai languages, the first three mentioned in the table are spoken in the upper Irawati districts. This region was once known as "the great Khāmtī land" and it lies to the east of Assam. These dialects are also found scattered through the Lakhimpur district. The remaining dialects of Northern Thai are found in the Shan states of Burma and to the east and north-east of Bhamo. Āhom was flourishing in Assam from the 13th century to the 18th when it became extinct.

§ *175. The Dravidian Family*

This family of speech is the most important in India after the Aryan Languages. It differs in almost all important respects from the Muṇḍā and in the very important particular that at least four of these languages are highly cultured and possesses fine literatures. They form a very compact group of agglutinating languages and some of the affinities they show to other families of languages are really surprising. Bishop Caldwell held that these languages "occupy a position of their own, between the languages of the Indo-Eurcpean family and those of the Turanian or Scythian group[1] not quite a midway position, but one considerably nearer the latter than the former". Other scholars, however, like Dr. G. U. Pope, maintain that the Dravidian family is "morphologically" of the same order as the Aryan.[2] These affinities have not yet been thoroughly worked out, but it would be really worth while studying these aspects of their history, particularly the mutual influence of Dravidian and Indo-Aryan. Prof. O Schrader of Kiel has tried to show their affinity to the

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[1] Caldwell means here the Ural and the Altai families of languages (see below §§ 248-249).

[2] R. Narasimhachar, *History of the Kannada Language*, pp. 5-6.

- Dravidian Languages
  - Drāviḍa group
    - Tāmil group
      - Tamil (Drāviḍa)
      - Malayāḷam
    - Kannaḍa
    - Tuḷu
    - Koḍagu (Coorg)
    - Nilgiri group
      - Baḍaga
      - Toḍa
      - Kota
  - Intermediate group
    - Gōṇḍī
    - Kurukh (or Oraon)
      - Kurukh
      - Mālto
    - Kūī (Kandhī)
    - Kolāmī
  - Āndhra—Telugu
  - Outlying Dravidian—Brāhuī

TABLE X.—DRAVIDIAN LANGUAGES

(Facing § 176)

Finno-Ugric family.[1] Lately, the discoveries at Mohenjo-daro of a culture allied to the Sumerian has opened up the possibility of linking up the Dravidian languages and culture with Sumer and still further west with Crete.[2] Finally Pater W. Schmidt[3] has discussed the remarkable connections existing between the languages of Australia and Dravidian. This idea contains "suggestions of a possible connection by land between India and Australia in the times when the prehistoric Lemurian continent is believed to have existed".[4] Kumārila Bhaṭṭa is said to have divided the Dravidian languages into two clear groups, *Āndhra* and *Drāviḍa*, which is substantially correct, although it leaves out minor languages. The chief Dravidian languages and their grouping is shown in Table X.[5]

§ *176. The Drāviḍa Group*

Among the languages of this group, and indeed among all the Dravidian languages, Tamil is the oldest and the best cultivated, and possesses the richest literature. It has works going back to the 3rd century B.C.[6] Modern Tamil literature is also very flourishing and Bengali and Marāṭhi seem to be its only close rivals today in matter of literary output. Ancient Tamil had an alphabet of its own, the Vaṭṭeḷuttu. The modern dialects are fairly uniform, but there are two forms of the standard dialect. One is the "perfect" (*shen*) form used in poetry and is somewhat stilted and artificial; the other is the so-called "vulgar" (*kodum*) form which is colloquial.

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[1] Prof. Schrader had lived many years in Madras as Director of the Adyar Library of the Theosophical Society at Madras. His article is entitled " Dravidisch und Uralisch " and appeared in the *Zeitschrift für Indologie und Iranistik, III.*

[2] See the article by Prof. Suniti Kumar Chatterji in *The Indian Historical Quarterly* (Mar., 1925) entitled " Recent Discoveries in Sindh and the Panjab ". The late Father Heras of St. Xavier's College, Bombay, had been working on the Mohenjo-daro inscriptions and had tried to affiliate them to the Dravidian family.

[3] In *Die Sprachfamilien und Sprachenkreise der Erde*, pp. 121 ff.

[4] Grierson, op. cit., p. 82. This same Lemurian continent would solve the problem of connecting the languages of Madagascar with those of Indonesia.

[5] Adapted from Grierson.

[6] The oldest Tamil work is the *Tolkāppiyan*, a treatise on Tamil grammar following the Aindra school of grammarians.

Malayāḷam is called "the eldest daughter of Tamil". It separated from the latter as an offshoot in the 9th century and developed a literature of its own from the 18th century. It is spoken on the south-western coast of India and in the Laccadive Islands. It came early under Brāhmaṇa influence and has been Sanskritised.[1] But the Moslem speakers of Malayāḷam, the Māpiḷḷāi[2] not having come under this Sanskritic influence speak a purer, though archaic, form of the language. Malayāḷam has got a fairly large literature, which was fostered under the enlightened princes of Travancore and Cochin.

Kannaḍa is the language of Mysore and of the western side of the peninsula. It also possesses a good literature, but the ancient poetical languages is quite stilted and artificial. The oldest Dravidian inscription discovored so far is the Halmidi Inscription of about 450 A.D., and it records the oldest specimen of Kannaḍa known to us.[3] The earliest literary work in this language is the *Kavirājamārga*, ascribed to Nṛpatunga (probably the Rāṣṭrakūṭa monarch Amoghavarṣa I), which is dated 850 A.D. This work names several earlier ones which have not yet been recovered. The papyri of the 2nd century A.D. discovered at Oxyrhyncus in Egypt contain a small Greek play or farce. In this some Indian words occur, which have been shown by Hultzsch to be Kannaḍa.[1] Kannaḍa is written in a script connected with that of Telugu, but the language is clearly very close to Tamil. Kannaḍa has got several minor dialects which seem to have been originally tribal or caste dialects.

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[1] The proportion of Sanskrit words borrowed in Dravidian languages is the least in Tamil and the greatest in Malayāḷam (Narasimhachar, op. cit., p. 32).

[2] Usually known as the *Moplas*.

[3] *Mysore Archaeological Report*, 1936, No. 16.

Of the other dialects of this group Tuḷu is confined to a very small area to which it has been restricted for a long time. It does not differ very materially from Kannaḍa. It is well cultivated and Caldwell regards it as among "the most highly developed languages of the Dravidian family", despite the fact that it has no literature. He adds: "it looks as if it had been cultivated for its own sake, and it is well worthy of careful study"[2]. Koḍagu (in Coorg) lies between Kannaḍa and Tuḷu both geographically and linguistically.

The Nilgiri dialects are used by mountain tribes who are among the most aboriginal races of India. Among them the Baḍagas are the most numerous. Their dialect seems to be an ancient form of Kannaḍa, for it agrees in many details with the language of the ancient Kannaḍa works. Toḍa and Kota are also the dialects used by the wild aboriginal tribes of the Nilgiri Hills. These two are spoken, according to the census reports, by less than 2000 people. The reason for the survival of the languages is that the tribes live among the hills and hardly ever mix with others. The Toḍas are a rapidly dying race.

§ 177. *The Intermediate group of Dravidian*

There are quite a number of languages, mostly spoken by the wilder forest tribes and they are spread over a belt in Central India stretching from the Berars to Bihar and Orissa and one little "island" of the Mālto dialect in Rajmahal on the Ganges. The most important of these is the Gōṇḍī. Many of the Goṇḍ tribes have now taken to speaking one of the Aryan dialects of their neighbours. There are a number Goṇḍī dialects but there is very little difference between them beyond local variations in pronunciation.

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[1] Ibid., 1904.

[2] Caldwell, *Comparative Grammar of Dravidian Languages.*, p. 31.

Kurukh (or Oraon) is a language which according to tradition comes from the Karnatik. It has close affinities with the Drāviḍa group and has a number of dialects, the most interesting of which is the Mālto spoken in the Rajmahal hills. It is considerably influenced both by the Aryan and the Santālī which are its neighbours. The Kurukh dialects occupy almost the same area in Bihar and Orissa as the Muṇḍā languages, and so there is a considerable exchange of words and also of grammatical peculiarities between them. In some places, tribes speaking the one type have abandoned it and taken up the other. Thus near Ranchi the Dravidian Kurukh has been abandoned in favour of a Muṇḍārī dialect. Kurukh and Mālto are believed to be comparatively recent encroachments of Dravidian upon Muṇḍā territory. The northern dialects of these are being steadily ousted by the surrounding Indo-Aryan.[1]

Kandhi or Kūī[2] is most nearly related to Telugu, and possesses a much simpler verbal conjugation than the other dialects of this group. The tribes that speak it are among the wildest of the tribes in Orissa and at one time human sacrifices were quite common among them.

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[1] Graff, *Language and Languages*, pp. 415f.

[2] *Kui* is the name used by the native speakers of the language. The Goṇḍs call themselves *Kōi*.

Kolāmī is found in the western district of the Berars. Here the influence of the Bhīlī dialects of Central India is to be marked. Indeed, the Kolāmī dialects like the Toḍa are fast dying out and are being replaced by the Aryan Bhīlī. Linguistically they are very close to Telugu.

§ *178. Āndhra*[1] *or Telugu*

This is practically a uniform language having local, tribal or caste dialects. It has the largest number of speakers among the Dravidian languages.[2] In respect of culture and literature it is second only to Tamil and in its modern phase it bids fair to rival the latter. Its literature dates from the 11th century and it has borrowed freely from Sanskrit. It is a language possessing great euphony, every word in it ends in a vowel[3] and it has a very pleasing sound as compared to Tamil which is harsher. There is also a distinct "harmonic sequence of vowels" closely akin to what is found in the Ural and Altai languages.[4] Its dialects are found scattered widely over parts of the Madhya Pradesh and Bombay. They have been carried there by wandering tribes of herdsmen, watchmen, shopkeepers, bricklayers etc.

§ *179. Brāhuī*

This is a remarkable linguistic island at the extreme end of Pakistan in the midst of Balochistan and surrounded by Iranian-speaking tribes. The Brāhuī speakers mix so freely with their neighbours and even intermarry with them so frequently that they are almost all bilingual. The real wonder is how the language has managed to survive so long in that corner. Its survival, surrounded as it is by entirely different type of languages, is as wonderful as that of Basque.

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[1] The word *Āndhra* as the name of a race occurs in the *Aitareya Brāhmaṇa* (vii. 18), in the Sanskrit Epics and in Aśoka's inscriptions

[2] The Dravidian languages are spoken by about 72 millions in India, of these nearly 20 millions speak Telugu

[3] Modern Kannaḍa has also developed this feature.

[4] See below § 247 (ii).

§ *180. Characteristics of Dravidian languages*

The Dravidian languages are agglutinating and polysyllabic, but their forms are by no means as complex and as extensively agglutinated as are the Muṇḍā forms. The agglutination is quite clear, the stem and the suffixes can be sharply distinguished, the stem itself remains unchanged. Other grammatical peculiarities are:[1]

(1) These languages possess the short *ĕ* and *ŏ* as well as the long *ē* and *ō*.

(2) There is an elaborate system of gender differentiation such as is not found in any other group of languages in India. The genders are essentially divided into "animate" and "inanimate". The pronouns of the third person alone show masculine and feminine and these are suffixed to adjectives as well. With nouns, where necessary, the word signifying "male" and "female" are added.

(3) The "inanimate", i.e., neuter nouns are rarely used in the plural.

(4) Postpositions are used instead of prepositions.

(5) The adjective is not declined so as to agree with the substantive as is done in I.-E. languages. Often participial suffixes of verbs are added to form adjectives.

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[1] For a list of the differences between Dravidian and Sanskrit (I.-E. languages) see Caldwell, *Comparative Grammar of Dravidian Languages*^{3} pp. 48 ff.

(6) There are two plurals of the pronoun of the first person—an "inclusive" and an "exclusive".

(7) There is no passive voice of verbs, the passive is expressed by means of an auxiliary. The middle voice (*ātmanepada*), too, is known by a few traces only.

(8) There is a "negative voice", which has, however, but one indeterminate (aorist) tense.

(9) Continuative participles are preferred to finite verbs.

(10) Relative participial forms are used in place of clauses introduced by relative pronouns.[1]

§ *181. The Aryan languages of India*

Without entering on the question of the original home of the Indo-European languages[2] we may take it for granted that the Aryans lived together for a considerable time before splitting up. And when they did separate the emigrations to different regions took place in successive waves. And it is more than probable that these successive waves both towards Iran and towards India did not all follow the same route. It seems that the Dardic languages, that occur midway between these two, split off *after* the Indo-Aryan had separated during the Proto-

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[1] "In the Dravidian languages, though nouns and pronouns are united by means of conjunctions, finite verbs are never so united. In every sentence there is but one finite verb, which is the last word in the sentence, and that the seat of government; and all the verbs which express subordinate actions or circumstances, whether antecedent or contemporaneous, assume an indeterminate, continuative character, as verbal participles or gerundials, without the need of conjunctions or copulatives of any kind, so that the sense (and more or less the time also) waits in suspense for the authoritative decision of the final governing verb. Hence these participles might probably be called continuative gerundials" (Caldwell, op. cit., p. 488).

[2] See § 163 above, pp. 204ff.

- Aryan Languages
  - Iranian
    - Western—(Iranī) Persian
    - Eastern
      - Afghān-Baloch
      - Pamir (Ghalchāh)
  - Dardic (Piśāca)
    - Khāwār
    - Kāfir
    - Dard
  - ? —Gipsy dialects (in Armenia and Europe)
  - Indo-Aryan
    - Outer Languages
      - North-western
        - 1. Lahndā
        - 2. Sindhī
      - Southern
        - 3. Marāṭhī
        - 4. Singhalese
      - Eastern
        - 5. Behārī
        - 6. Oriyā
        - 7. Bengalī
        - 8. Āssamī
    - Intermediate — 9. Eastern Hindī
    - Inner Languages
      - Northern — 10. Pahārī
      - Central (pure)
        - 11. Western Hindī
        - 12. Rājasthānī
        - 13. Forest Dialects
      - Southern (superposed) — 1 . Gujarātī
      - Western (superposed) — 15. Panjābī

TABLE XI.—MODERN ARYAN LANGUAGES IN INDIA.

(Facing § 181)

Iranian period. Representatives of all the three branches of the Aryan languages are to be found in India. The main groups of the Aryan languages of India are shown in Table XI.

This table shows the chief Modern Aryan languages spoken in India and in the neighbouring lands on the borders. It would be out of place here to enter into a discussion regarding the triple division of the Indo-Aryan languages of India. The grouping into Inner and Outer Languages, with an Intermediate link, was first suggested by Hoernle and has been accepted by Grierson, though the latter holds an entirely different opinion regarding the cause of this peculiar arrangement.[1] Grierson explains the position by assuming that the Aryans did not come to India in one single "invasion" or wave of immigration, but clan after clan, speaking closely related and mutually understandable dialects, continued to arrive during a long period of years. The Aryans[2] who arrived first were naturally the first to pass on into the *Madhyadeśa* (the Midlands, between the two great rivers Gangā and Jamunā). This was the region known as the *Āryāvarta* (the Aryan-pale) and this was the land where Hindu-Aryan culture was finally fixed and its laws codified. The Aryan clans that arrived later on had naturally to meet with opposition from these first settlers and many of them went round this Midland settlement and in course of time these first Aryans in India found themselves surrounded on all sides by the late comers. As can be well imagined it was not a comfortable position for the midland people to be thus surrounded. They made efforts to expand, else they would have become extinct. And they did expand in all directions. In the north they reached the Himalayas, where they settled down in the valleys of Nepal and in the Western Himalayas right up to Kashmir. In the south they reached the sea through Gujarāt. In the west they reached almost to the Indus and in the east almost up to Banaras. In the north they did not find any other Aryan language, but in the other three directions there were other Aryan languages. So there grew up three "intermediate" forms of Aryan languages. Of these three, Eastern Hindī in the east is a real bridge between the true Inner languages and the Outer ring. In the west we have Panjābī which is an Inner language superposed upon an older Aryan language of the Outer group. Similarly in the south Gujarātī is a superposed Inner language.[1]

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[1] See Grierson, op. cit., pp. 115 ff. See also his papers on "Indo-Aryan Vernaculars" in the *Bulletin of the School of Oriental Studies*, I, 2, pp. 47-81; and I, 3, pp. 51-85.

[2] I wish to point out clearly again that I do *not* wish to impart any ethnic significance to this word.

§ *182. Iranian languages on the western border of Pakistan*

Iranian languages are not indigenous to India-Pakistan except those spoken in Balochistan, on the western borders of the Panjab and along the North-West Frontier of Pakistan. In many respects the most important Iranian language from the point of view of Indian linguistics is Persian, which belongs to the West Iranian group. This language is nowhere a vernacular in India to-day except among families very recently settled in this country.[2] The

[1] Gujrāt was a colony from Mathurā in the Madhya Bharat.

[2] There is however a small Iranian colony of about 7,500 people in Balcchistan who speak an Iranian dialect called Dewārī. Of the Iranians settled in India the Zoroastrian Parsis have made Gujarātī their mother-tongue. Zoroastrian Iranis settling in India do the same in the second or third generation. Moslem Iranians settling in India usually make Urdu their mother-tongue in the same manner. This state of affairs may be compared to the adoption of English by all immigrants in the United States of America.

- Iranian Languages[1]
  - West Iranian
    - (Irānī) Persian
    - Ormuṛī (Bargistā)
  - East Iranian
    - Afghān
      - Pashto (South-western)
      - Pakhto (North-eastern)
    - Balōčī
      - Makrāni (western)
      - Eastern Balōčī
    - Pamir dialects (Ghalchāh)
      - Wakhi
      - Yidghāh

TABLE—XII.—IRANIAN LANGUAGES ON THE WESTERN BORDERS OF PAKISATN.

(Facing § 192)

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[1] See also Table XXX.

other Iranian languages used on the border are of the East Iranian group. Their relationships are indicated in Table XII.

Ormuṛī or Bargistā is a language spoken in the heart of Afghanistan by a few thousand speakers. A few speakers of Ormuṛī are also found in the N.-W. Frontier of Pakistan. It is an interesting language possessing some points of resemblance with Persian, some with other West Iranian dialects (like Kurdish)[1] and some with Pashto. Grierson has put it in the Afghān-Balōcī group more for geographical than for linguistic reasons.[2]

There are numerous Afghān dialects in the different mountain districts of that land. But there are two divisions of the language: the south-eastern or Pashto and the north-western or Pakhto. The very names suggest that the differences are mainly phonetic in character. In fact the Afghān language (including all the dialects) is often called Pashto. The language is strong and vivid but very harsh-sounding.[1] It has borrowed a considerable vocabulary from the adjacent Indian dialects. Since the beginning of Indian history parts of Afghanistan have been recognised as kindred to India. During the Buddhist and later Hindu periods Afghanistan formed part of the empire of the Mauryas and the Guptas; and even in the days of the Moghals Afghanistan was part of their empire. With all this intimate contact with India it need not surprise us to know that even the grammar of the language shows Indian influences.

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[1] Grierson in his monograph on "The Ormuṛī or Bargistā Language" (*Memoirs of the Asiatic Society of Bengal*, VII. 1, p. 52) maintains that "on the whole it agrees generally, and closely, with the western Iranian dialects, including Kurdish". As confirmatory evidence he cites the Ormuṛī word *spuk* (dog), which agrees very closely with the Medic word *spáka* mentioned by Herodotus.

[2] This same reason probably has caused Grierson (*Linguistic Survey of India*, I, I, pp. 102ff.) to divide Iranian languages into the Persic (Western) and Medic (Eastern) As far as the language of Media is concerned, "no remains of a Medic language have been discovered" (Sykes, *His. of Persia*², I, p. 121). See also *Grundriss der iranischen Philologie*, II, for all the knowledge we possess about Medic. The word "Medic", however, used by Grierson in the *Linguistic Survey of India* is not a very happy choice. Elsewhere he speaks of "Non-Persian" languages of Iran.

Balōcī is spoken in Western Sindh as well as in Balochistan proper. Among the Iranian languages it is the least advanced to the analytic stage and preserves a great many archaic forms. In the eastern dialect there is a considerable borrowing from Indian languages, especially from Sindhī and Lahndā. Balōcī has borrowed from Persian and Arabic like other East Iranian languages. But certain Arabic sounds cannot be pronounced in Balōcī, hence a good many words from that language have undergone strange transformations. Balōcī possesses a small literature consisting of folk-songs and tales.

The Ghalchāh (Pamir) dialects are non-literary and are spoken in very inaccessible regions,[2] Yidghāh and Wakhī are the only two of these dialects spoken within the limits of India-Pakistan. These dialects form a link connecting Iranian and Dardic languages.

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[1] Grierson (op. cit., p. 103) quotes a well-known proverb: "Arabic is science, Turki is accomplishment, Persian is sugar Hindostānī is salt, but Pastō is the braying an ass!" Does the name *kharoṣṭhī* imply this?

[2] Grierson mentions (op. cit , p. 21) how a specimen of one of the Pamir dialects was delayed for months, because officers of the Linguistic Survey knew only one person who knew both the dialects in question and Citrālī, which they understood and this person could not be approached because snow blocked the passes across the Hindukush!

§ *183. The influence of Persian (Irānī) on Indian languages*

Indian languages of the outer group, which are on the western and north western border are full of words of Iranian origin—especially from Persian, for it was the language of Islamic culture. But long before the Islamic conquest Iranian words were introduced into the Prakrits and Sanskrit.[1] The province of Gujarāt had active and constant commercial intercourse with the Persian Gulf and as a result of that intercourse a number of Middle-Iranian words came into the language of Gujarat centuries before the Islamic conquest.

After the Islamic conquest the influence of this most important language of the Islamic world (viz., Persian) grew and spread wherever Islam extended its empire. Every language of India has been more or less deeply influenced by Persian vocabulary through a wholesale borrowing of Persian words. Most students of Indian languages have a tendency to belittle this influence. Of course, these languages had no direct touch with the speakers of Persian, hence the grammar was not affected, though doubtless the analytic tendencies inherent in these languages were strengthened by the influence of Persian, the most analytical of all Aryan languages.

Besides these pre-Islamic and post-Islamic borrowings from Persian, mention might be made of Iranian colonies on

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[1] E.g. शेरक (*shēr*, lion) and हूरक (*hurā*, wine), which are both found in the *Arthaśāstra*.

Indian soil. The Parsis in the 10th century[1] merely followed the example of numerous predecessors. In Kashmir, in the Panjab, in parts of Gujarat and even in Bihar traces of Iranian colonisation are to be found. These Zoroastrian Iranians, worshipping the Sun and Fire, became absorbed in the indigenous population and were named the *Śākadvīpīya Brāhmaṇas.*[2] Undoubtedly these colonists introduced a great many Persian words in the languages of the people.

The most remarkable influence of Iranian is to be seen in the growth of Urdu as a distinct language in later centuries. This will be considered at its proper place.

§ *184. Dardic or Piśāca languages*

The people of the region known as Dardistān—a mountainous region between the north-west of the Panjab and the Pamirs—were Aryans who had left their Aryan[3] home some time before the Indian dialects had crystallised. They show clear Aryan affinities but their position is midway between Indian and Iranian. They have preserved a great deal of the original Aryan structure. The name of the Dards is found in Sanskrit literature, in the Epics and the Purāṇas.[4] They were also known to the Greek writers of history and geography. The Sanskrit writers looked upon them as degraded Aryans, and often called them *Piśācas* or "demons" and their languages and the languages influenced by them are called *Paiśācī*. At one period, the Dardic languages spread over

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[1] Prof. S. H. Hodiwala in his *Studies in Parsi History* has shown the inconsistencies of the dates previously accepted. See my paper on "The Exact Date of the Arrival of the Parsis in India" in the *Kané Festschrift* (1941).

[2] See the *Bhaviṣyat Purāṇa* for a detailed description of these very interesting people.

[3] Note the *Aryan*, not the I.-E., homeland.

[4] They are called दारद or दरद.

- Dardic or Piśāca Languages
  - Khōwār group (→Ghalchah)[1]—Citrārī (Citrālī)
  - Kāfir group
    - Bashgalī
    - Wai-alā
    - Wasi-verī (Veron)
    - Ashkund
    - Kalāshā-Pashai
  - Dard group
    - Shinā
      - Gilgitī
      - Brokpā (Highland dialects)
    - Kashmīrī
      - *Kāśmīrī*[2]
      - Mixed dialects (→ Panjābī)
      - Kashtwarī
    - Kohistānī
      - Maiyā (Indus Kōhistānī) (→Shinā)
      - Gārwī
      - Torwālī

TABLE XIII.—DARDIC OR PIŚĀCA LANGUAGES

(Facing § 184).

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[1] In this and in the Tables that follow (XIV-XX) an arrow indicates that the language shades off into the other by imperceptible degrees through a succession of mixed dialects.

[2] In this and in the Tables that follow (XIV-XX) names in *italics* indicate "standard" literary dialects.

a very much wider extent, but before the oncoming "Outer Aryans", as well as owing to the subsequent expansion of the "Inner Aryans", the Dards fell back into the inaccessible mountain regions from whence they had first come out. But their languages have left ample traces on the later Indo-Aryan languages that replaced them. Lahndā, Sindhī and Panjābī, in Nepālī and even in the far south Kōṅkaṇī dialect the influence of Dardic may be traced. The chief Dardic languages are shown in Table XIII.

The Khōwār group serves to connect Dardic with Iranian, just as the Kāshmīrī dialects link up with Panjābī Indo-Aryan. The Kāfīr languages are spoken in an extremely inaccessible region to the west of Citrāl.[1] And a few of those are also spoken in the Afghān territory conterminous with Kāfīristān.

The Dard group is closely connected with the Kāfīr group. Shīnā is the language of the Gilgit valley and of the Indus valley from Baltistan to the river Tangir. This is the original Dard country, hence Shīnā represents the modern form of Dardic. Kāshmīrī is the only Dardic language possessing a literature. Among the most remarkable works in this language are the Śaiva poems of Lalla or Lal Dĕd a poetess of considerable gifts.[1] There are slight differences of vocabulary between the dialects of Hindu and Musalman Kāshmīrīs, as might be naturally expected. The mixed dialects to the south shade off into Panjābī. The Kōhistānī dialects are gradually receding before Pashto, only a very few still cling to the speech of their ancestors.

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[1] Grierson mentions (*LSI.*, I. 1, p. 110) that for a specimen of the Wasī-veri or Veron dialect the officers concerned could get hold of none but a wild and half-stupid shepherd from some valley. The poor fellow could talk only his own language and was, moreover, badly frightened when caught for the purposes of the Linguistic Survey. An old man, a Bashgali, was, however, discovered who somehow contrived to interpret. Of course such results cannot be regarded as scientifically accurate, but we must also remember that this is the first time that many of these languages are put before critical students of linguistics. Even the Linguistic Survey has its humorous side !

§ *185. The Gipsy languages*

Among the languages treated in the *Linguistic Survey of India* there is a group called "Gipsy Languages". But these are mere "argots", i.e., forms of speech deliberately corrupted and twisted for the purpose of secret communication. Some of these are dialects of wandering tribes, which have got quite mixed and corrupted owing to their having come in contact with many different forms of speech in the course of their wanderings. Owing to the fact that there is no literature, these changes have been rapid and bewildering. These varieties will be considered later on in the section of "Argots" (§ 200).

But the true Gipsy Languages are spoken outside India and are therefore not considered in the *Linguistic Survey*. These are divided into two broad groups, the European and the Armenian. These wandering tribes, it seems, set out from India about the 5th century A.D. and passing through Dardistān into Īrān they went on into Armenia. Another branch went on further into Europe—into Hungary, Russia, Poland and Germany. Some even penetrated into France and England. Most of their dialects show clear Dardic influences, thereby proving that they had stayed a considerable time in Dardistān. Perhaps already in the land of their origin, there was the Dardic influence present, even before they set forth on their wanderings. The land of their origin seems to have been the Panjāb. In each of the lands where they "settled",[1] their dialects borrowed largely from the native languages; and hence the Gipsy Languages show a bewildering variety of vocabulary and outward form. But careful examination of their structure points unmistakably to the North Indian Prakrits as the point of origin of all these languages. The time of the Gipsy emigration is not quite fixed, but it is certainly not very far from that indicated above, viz., the 5th century A.D. That was the period of great folk-migrations all over the eastern world. Incidentally these languages supply good material for determining the phonetics of the Indian languages at that date.[2]

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[1] These have been published by Grierson and Barnett in a book, *Lalla Vākyāni* (Asiatic Society Monograph, No. xvii, 1920).

The very queer mixture of the original Indo-Aryan language with the modern European languages may be appreciated from the following specimens of "English Gipsy", where the pure English words and suffixes are in italics:

The tatcho drom *to be a* jinni-mengro *is to* shūn, dik *and* rig *in* zi.

(The true way to be a wise man is to hear, see and bear in mind.)

Dui Romany chals *were* bitcheni
Pawdle *the* bori pāni;

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[1] They are perpetually wandering about and on principle they object to dwelling in houses. So by the word "settled" we must understand merely that they remained in that country for some time.

[2] As is the case with Persian as pronounced in India to-day, which preserves the ancient pronunciation of that language, closely allied to the Pahlavi and with the vowels fairly open. So also the pronunciation of Chinese in Japan is of the days when Chinese culture was first introduced into that land.

Plato *for* kōring,
Lasho *for* chōring
The putsi *of a* borī rānī.
(Two Gipsy lads were sent away
Across the great waters;
Plato for rioting,
Lasho for stealing
The purse of a great lady.)[1]

§ 186. *Stages in the growth of Indo-Aryan Languages*

Before taking account of the modern Indo-Aryan languages it would be well to glance rapidly at their historical development from the earliest period. Fortunately we possess full materials for the linguistic history of India from the earliest times in an unbroken series of records. Not only that, but from the earliest times Indian scholars themselves have been investigating linguistic phenomena with wonderful accuracy and insight and we owe a great many details of the languages of the ancient days to these indigenous grammarians. We can make out quite clearly three periods which shade off insensibly from the one into the next. In each period there was a literary "standard" dialect, which constitutes our main source of information for the dialects of that period; but the native grammarians for each period have given us quite a lot of information regarding the phonetics and other details of the various *spoken* dialects also. These three periods are called Old Indo-Aryan, Middle Indo-Aryan, and New

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[1] *tatcho* (सच्चा); *drom* (Mod. Grk. *drómos*); *jinney* (from ज्ञा to know), *mengro* (a masculine suffix meaning a person, so *jinni mengro* means a "knowing person"); *shūn* (सुनना); *dik* (देखना); *rig* (रखना); *zi* (Skt. धी) *chal* (खेल, Bengali खेलि); *bitchcni* (sent away); *pawdle* (across); *kōr* (to riot); *choring* (चोर); *putsi* (purse, Skt. पुटम्); *borī* (बड़ी); *rānī* (generally means a lady and *rāi* is a gentleman).

(or Modern) Indo-Aryan.[1] Other names for these are Primary Prakrits, Secondary Prakrits and Tertiary Prakrits, respectively and these are really better. For they include the word *Prākṛta* (प्राकृत) which means "common" i.e., spoken language[2] as opposed to *Saṁskṛta* (संस्कृत) the "polished" dialect of literature. Students of the linguistic history of India are particularly prone to think of Sanskrit as the only language to be considered, whereas, as a matter of fact, it was but *one* of many dialects, even though its importance as an instrument of culture far exceeds that of all the rest put together. The languages of these three periods and their connections are diagrammatically shown in Table XIV.[3]

§ 187. *Primary Prakrits*

The oldest languages of which we have records in India are the Old Indo-Aryan languages (rather dialects) or the Primary Prakrits. There are two groups to be distinguished —(i) the colloquial dialects and (ii) the literary dialects. The former have been noticed in the earliest works on Indian grammar and phonetics—the various *Prātiśākhyas*. They are divided phonetically and geographically into five groups—Northern, Western, Southern and Eastern with the Midland dialects in the centre. These last were the original Inner dialects—probably of the first immigrants

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[1] I prefer not to give any dates, but I merely indicate the order of succession.

[2] Or rather *vulgar* in the same sense as in the name "Vulgar Latin".

[3] I have adapted this table from that given in Prof. Suniti Kumar Chatterji's *Origin and Development of the Bengali Language*, Vol. I, facing p. 6. Dardic is included in this table because the *Piśāca*-Prakrits are included among Secondary Prakrits by Indian Grammarians.

into India. The outer surrounding dialects were those of the later Aryans who went round this Midland colony. Each of these in turn developed into the various Secondary Prakrits.

The literary remains of this period are the Vedic hymns. The hymns were actually composed at a period considerably more remote than when they were actually edited and the whole collection was arranged. Many of the hymns were actually composed outside India proper. The composition of the Vedic hymns extends over a number of centuries and the geographical area over which they have been composed is also of considerable extent. Traces of differences of dialects both in point of time as well as of location are to be found clearly in some of the hymns. The *Yajur Veda* shows clearly the distinction of time—some of the hymns are among the most ancient in Sanskrit. The *Atharva Veda* is, on the whole, the latest production of the Mantra-age. In the *Ṛg Veda* we have the so-called "family books" (*Maṇḍalas* ii-viii), which show clear dialect distinctions. There are certain words and phrases common in one book, which are not found in the others and so also are certain grammatical forms peculiar to certain books. Later on, in the Primary Prakrit period, we find the Vedas "edited" and fixed in their present shape. This period also produced the later Vedic Literature —the *Brāhmaṇas*, the *Āraṇyakas and the Upaniṣads.* The language of all these literary works is known by the generic term "Vedic Sanskrit".

§ *188. Classical Sanskrit*

The literary languages of the Primary Prakrit period are the earliest varieties of Sanskrit. That particular dialect was quite close to the spoken dialects and so it also continued to develop with the other dialects. Since the editing and collecting of the hymns, however, this particular dialect got the double conserving force of religion and literature. It was, however, a period of movement and activity and the later literary language in the *Brāhmaṇas* is appreciably different. The latter is clearly more progressed on the way to analysis. Even at that period the Vedic hymns seem to have been regarded as ancient and as needing special commentaries and explanations in order to understand them well.[1] Towards the end of the Vedic period[2] was produced a work of far-reaching importance in the linguistic history of India. That was the great grammar of Pāṇini, which effectually stopped all growth of this literary language.[3] From that time Sanskrit ceases to be a natural, spontaneous language and in the course of ages it gets more and more artificial. But in spite of this it has wielded enormous influence upon all subsequent linguistic development of India. It has always remained the literary language *par excellence* of India.

§ *189. Secondary Prakrits*

In the second stage the languages usually known by the name of "the Prakrits" were the chief spoken Aryan languages of the country. And in course of time literature began to be produced in these languages also. The rise of Buddhism and the fact that the Buddha preached his

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[1] Therefore in the *Brāhmaṇas* we find the first liguistic (etymological) speculations of India.

[2] Or perhaps early in the period of Secondary Prakrits. Pāṇini is certainly earlier than any literary work (poetry or drama) of classical Sanskrit. The Epics might have been earlier *in their original redaction*. Many of their verses show archaic formations which have entirely disappeared from later Sanskrit.

[3] See below Chapter XIV, § 267.

Gospel in the language of the people was a direct cause of the production of literature in these languages. The first of these to have a literature was Pālī. The learned people and the Brāhmaṇa writers continued to produce works of literary merit in Sanskrit; in the drama however, Prakrit was freely used. Only men of the higher orders spoke Sanskrit in these, all women[1] and the lower classes spoke Prakrit. This is probably a true picture of the linguistic state of India at that time. The higher classes would be speaking Sanskrit to show off their learning and also to maintain their prestige.[2]

The period of Secondary Prakrits may again be subdivided into three stages: (i) the Early Prakrit stage, (ii) the Middle Prakrit stage and (iii) the Late Prakrit (or Apabhraṁśa) stage. The first two are represented in Prakrit literature, but the last stage is purely colloquial and our knowledge of the Prakrits in the Apabhraṁśa (or colloquial) is gleaned from grammarians like Hemacandra, who have described this stage in some detail. Of course the languages were used for colloquial purposes all through, but in the earlier days colloquial and literary forms were much closer together. It was only in the final stage that the literary language became fixed and stereotyped, and consequently drifted further and further apart from the spoken language of home. Hence, in the last stage of the Prakrits, grammarians had to point out particularly the essential unity of the spoken language with the literary.[3]

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[1] Rarely, learned women, like Buddhist nuns, would be represented as talking Sanskrit. Prakrit was essentially the *mother*-tongue.

[2] Much as the Pandit class to-day interlard their vernacular speech with Sanskrit words and phrases and the modern English educated people do the same with English words and phrases.

[3] "The different Prakrits were mutually understandable among the educated. A speaker of Sanskrit, whose *mother-tongue* was the spoken

The Early Prakrit stage has for its literature: (i) the oldest inscriptions (including all the Aśoka inscriptions); (ii) the Pali of the Buddhist Canon and of the *Mahāvaṁso* and of the *Jātakas*; (iii) the Prakrit of the earliest Jaina writings; and (iv) the Prakrits of the earliest Sanskrit plays like those of Aśvaghoṣa discovered some time back in Central Asia.

The Middle Prakrit stage includes: (i) Mahārāṣṭrī in which a fine poetical literature is found; (ii) the Prakrits of the classical Sanskrit Drama [1]; (iii) the Prakrits of the later Jaina books; and (iv) the Paiśācī which is known only from the grammarians.[2]

The Apabhraṁśa (or colloquial) Prakrits represent the last stage of the second epoch in the linguistic history of India. The Apabhraṁśa dialects represent a very colloquial form of the various Prakrits from which the modern Indo-Aryan Vernaculars of India, the Tertiary Prakrits, have been directly derived. They represent the last days of the Prakrits and the beginnings of the Vernaculars. There is no literature recorded in these, for in their very nature they are corrupt (*apabhraṣṭa*) and "vulgar" and consequently they are not fit for literary usage.[3]

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form of any one of the Prakrits, would readily understand any of the literary Prakrits...In the older stage the difference was still less marked. Still further back we should find only the difference between 'correct' and 'incorrect' pronunciation,...—the difference between the speech of educated and uneducated people speaking substantially the same language" (Woolner, *An Introduction to Prakrit*, pp. 8-9). Later on Woolner draws an interesting parallel between this state of affairs and what occurred in Europe during the birth stages of the Romance languages.

[1] These are described in detail by the Prakrit grammarians.

[2] Woolner, op. cit., p. 2.

[3] This statement needs some modification. The vulgar dialects were sometimes used for composition and in that connection these have received the attention of the grammarians. As a matter of fact the

§ 190. *Literary Prakrits*

From Table XIV it will be seen that the Literary Prakrits also group themselves into Outer and Inner. The latter, known as *Śaurasenī*, is directly connected with the Primary Midland Prakrit and in its turn gave birth to the Midland Language—Western-Hindi of to-day. Of the Outer Prakrits the important ones are *Mahārāṣṭrī* (southern) and *Māgadhī* (eastern). Other Outer Prakrits are those of the north and west represented in the Inscriptions. Then there is *Ardha-Māgadhī*, a variant (as the name implies) of the *Māgadhī*.[1] Out of it is born the Mediate language, Eastern Hindi.

Mahārāṣṭrī is *the* Prakrit of the grammarians.[2] They first give its rules and then compare the other dialects with it and enumerate the variations. It has a magnificent literature of lyric poetry. In Sanskrit dramas the lyric pieces to be recited in Prakrit are given in Mahārāṣṭrī. The great power of this dialect in songs and lyrics is clearly seen in Rājaśekhara's *Karpūramañjarī*. The language originated in the Deccan and its main feature is the abundance of vowels[3] in it making it fitted for song and music.

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records of any Apabhraṁśa would be indistinguishable from the oldest relics of the corresponding Tertiary Prakrit.

[1] Grierson thinks that Ardha-Māgadhī is a transition form between Śaurasenī and Māgadhī. Geographically this is perfectly accurate. Woolner, however, mentions that in this classification the position of Ardha-Māgadhī is "a weak point" (op. cit., p. 64). He mentions that between Māgadhī and Śaurasenī in the early stages the differences consist of merely "striking phonetic variations", whereas the Ardha-Māgadhī of the early Jaina scriptures is something very different.

[2] महाराष्ट्राश्रयां भाषां प्रकृष्टं प्राकृतं विदुः—Daṇḍin, *Kāvyādarśa*, i. 34.

[3] Single intervocalic consonants are usually dropped, e.g., उदक becomes उअअ, प्राकृत becomes पाउअ, सुभग becomes सुहअ, and so on.

Saurasenī is the usual Prakrit of the prose portions in Sanskrit and Prakrit dramas. It is nearest to classical Sanskrit. It originated in the original Madhyadeśa, the home of Sanskrit. "Owing to this close kinship with the sacred tongue, Saurasenī was overshadowed; continually influenced by Sanskrit, it failed to make much independent progress".[1]

Māgadhī is the dialect of the eastern borders of Aryan culture and hence in the drama it is spoken by lower classes. Several dialects are distinguished. This Prakrit has very strongly marked phonetic peculiarities. In many ways it is the most interesting of Prakrits [2]

Ardha-Māgadhī is, as the name itself implies, a transition variety between Saurasenī and Māgadhī. But it is more archaic than Saurasenī. The Jaina scriptures are in this dialect, but Jainas also used Saurasenī and Mahārāṣṭrī for their works.

Paiśācī has been mentioned by the Prakrit Grammarians and mention is made of the *Bṛhatkathā* composed' in it. But the work is not extant. One important characteristic of this dialect is the substitution of voiceless for voiced mutes, e.g., तामोतर for दामोदर and so also राचा, नकर, etc. There is a good deal of cerebralising, too, in the variety of Paiśācī discussed by Hemacandra.[3] It seems that this constituted a group of Aryan dialects taken up and corrupted by non-Aryan speakers on the borders of the Aryan-speaking region, or else Paiśācī dialects may have been very corrupt forms of Aryan dialects. In any case, there is reason to suppose that Paiśācī dialects were not necessarily confined to Dardistan, though they may have originated there.[1]

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[1] Woolner, op. cit., p. 5.

[2] The reason of the striking phonetic variations in Māgadhī seems to be close contact with non-Aryan languages. See Woolner (op. cit., pp. 57ff.) for an enumeration of the peculiarities of Māgadhī.

[3] Called by him चळीका पैशाची See Woolner, op. cit., pp. 68f.

The *Inscription Prakrits* show several dialectical peculiarities, especially those of the north-western languages.[2] They have been classified into various groups. Among these we may also include the Prakrit of Khotan. They all, in fact, belong to the Northern and Western groups of the Primary Prakrits. Mention may here be made of the *Gāthā* dialect of Buddhist literature. It is a queer mixture of classical Sanskrit and Prakrit.

Pālī is the most important of the "Literary Prakrits". The name "Pālī" originally means "boundary" or "limit", and then it was applied to the Canon of Buddhism. Thence it was applied to the language itself in which the works were written. In phonetics and grammar Pālī retains more of the structure of the original Indo-Aryan than any of the other Prakrits, which shows that Pālī is among the oldest of the Prakrit languages.

The exact position of Pālī among the languages of the secondary period is a matter of dispute. The Buddhist tradition has it that the Buddha preached in Māgadhī and so some scholars seem to think that Pālī was a sort of cross between Old Śaurasenī and Old Māgadhī. On the other hand the Indo-Aryan language of Ceylon is a direct descendant of Pālī, which was carried to Ceylon by Mahinda, the son of Aśoka, from Ujjain. In that case Pālī would be a Mahārāṣṭrī dialect strongly influenced by Avanti, a Western dialect. This seems to be supported by the fact that Eḷu (the ancient form of Singhalese) and modern Singhalese show very close resemblances to Mahārāṣṭrī and Marāṭhī.

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[1] See Woolner, loc. cit.

[2] One of these peculiarities is the preservation of the conjunct consonant when the second one is *r*, e.g., *priya* for the usual Pk. *piya*.

§ 191. *Characteristics of Prakrit Languages*[1]

In spite of these dialectic differences the whole group of Prakrits shows certain distinguishing peculiarities as contrasted with Sanskrit. The Prakrits (including Pāli) are still synthetic in structure though much less so than Sanskrit. The Indo-Aryan cases are tending to disappear as also the wealth of verbal forms. As we come to the Apabhraṁśa stage the noun has only two or three case-endings and the verb is "little more than one tense and two participles". Out of this broken down synthetic structure the analytic modern Indo-Aryan languages of India have grown up. In phonetics conjunct consonants are assimilated, the *vṛddhi*-diphthongs disappear as also the sonants. The *y* also tends to disappear, being replaced by the *j*. Of the three sibilants only one survives, usually the dental (स्); but in the Māgadhī the palatal (श्) survives. The ***visarga*** too disappears. The Prakrits have developed the more open vowels ɛ and ɔ while retaining the older *e* (ए) and *o* (ओ). Final consonants tend to disappear; and not more than two consonants can follow a short vowel and not more than one if the vowel is long. In Mahārāṣṭrī intervocalic consonants usually disappear and thus we get a string of vowels occasionally helped by a consonant. So it becomes hard to recognise बप्पइ राआ as वाक्पति राजा and ओइण्ण as अवतीर्णं.

The dual has disappeared and the only case forms remaining are the nominative, accusative and genitive. All declensions are levelled to the *a*-declension. Similarly in verbs the imperfect, perfect and aorist have gone as also the ātmanepada. In Pāli, however, the ātmanepada and aorists are found quite often and even the perfect is sometimes found. But the use of prepositions and auxiliaries to take the place of the forms that have disappeared does not begin till the Apabhraṁśa stage, because the more important works in literature at that period were composed in Sanskrit, owing to the Hindu revival and the re-establishment of Brāhmaṇa domination.

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[1] I have been obliged to Woolner's book, so often quoted, for this section.

§ 192. *Origin of Tertiary Prakrits*

The beginning of the Modern Indo-Aryan vernaculars of India dates from about the 1000 A.D. when Islam began to count as an important factor in Indian history and Indian life So Irānī (and through it Arabic) has been an important factor in the development of these Tertiary Prakrits. As already seen above, these are derived from the Apabhraṁśa forms of the Prakrits. Some of these latter are named and described by the Prakrit grammarians even though there are no literary dialects corresponding. Among all these Apabhraṁśas the influence of the Saurasenī (Midland) form is predominant.

The *Vrācḍā* Apabhraṁśa which gave rise to Sindhi is mentioned by grammarians, but no mention is made of the Apabhraṁśas from which Lahndā and Panjābī have arisen. In the latter, however, there are certainly traces of *Sauraseni* influence. The Pahāḍī languages can be traced to the *Khaśa* Apabhraṁśa, which belongs to the Himalayan branch of North Indo-Aryan.

The Western Indo-Aryan was most probably of the Outer group and from it can be derived several inscriptional Prakrits as well as the *Avanti* dialect. One of these

Prakrits is the *Saurāṣṭrī* in which numerous inscriptions have been discovered. Over this group of dialects there came the very strong influence of the midland Śaurasenī and the resulting Apabhraṁśa was very largely altered. It became, in fact, so impregnated with the peculiarities of the inner group that this *Nāgara* Apabhraṁśa and the Gujarātī-Rājasthānī languages derived from it are now to be classed as of the inner group.[1]

From *Pālī* is derived through *Eḷu*[2] the modern language—Singhalese—of Ceylon. *Mahārāṣṭrī* is the only southern Prakrit, and is the sweetest of them all and gives *Marāṭhī*. Both these—Singhalese and Marāṭhī—show considerable resemblances to each other.

Śaurasenī, the midland dialect, is the most important and the only one of the inner group of the Prakrits. From it comes Western-Hindī, one dialect of which, Hindōstānī, has been the *lingua franca* of India for several centuries. Western-Hindī has influenced Rājasthānī very profoundly.

Māgadhī and *Ardha-Māgadhī* are both branches of the same Eastern Indo-Aryan. The latter possesses some literature going back to the Old Prakrit stage, which is, in consequence, more archaic in form than Śaurasenī. From *Ardha-Māgadhī* has come Eastern-Hindī which also has been strongly influenced by Western-Hindī. *Māgadhī* has had four languages derived from it: Behārī, Oriya, Bengali and Assamese. The last two form a fairly close group.

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[1] The Śaurasenī influence on the ancestor of Panjābī also tended to change an outer dialect into an essentially inner one.

[2] The word *Eḷu* is *Heḷu* from *Hiaḷu*<*Sīhaḷu* (=*Siṁhala*), i.e., Ceylon.

§ 193. *Influence of Sanskrit on Tertiary Prakrits*

Although Sanskrit had ceased to develop at a very early period, still the literature it embodied and, even more, the religion and culture it enshrined, gave it at all times a unique position among the languages of India. Wherever any abstract or higher idea had to be expressed, it had to be done by means of Sanskrit words with well-known and long-established connotations. Hence the debt to Sanskrit of all Indian languages, which have been at all cultivated—even of the Non-Aryan Dravidian languages—is incalculable. All the Aryan languages have had their basis in one of the sister dialects of (Vedic) Sanskrit and so the whole vocabulary must be Sanskritic; but even after the Primary Prakrit period was over and after the Prakrits had become definitely different from the learned and literary Sanskrit, the borrowing of Sanskrit words went on. A knowledge of Sanskrit was essential for any pretension to learning and culture, and often Sanskrit words were used even when pure dialect words were available. Accordingly the words in modern Indo-Aryan languages are classified as *tatsama*, *tadbhava*, and *deśya* *Tatsama* are words which are direct borrowings from Sanskrit,—words which are "like that (i.e., Sanskrit)".[1] *Tadbhava* are words which have come down from the Prakrits,—words which are "derived from that (i.e., Sanskrit)". *Deśya* words are such as cannot be traced to any original Sanskrit word. Sometimes these words may be connected with words in other Indo-European languages and thus traced back to the original Indo-European parent language. To these three classes modern scholars add a class of *ardha-tatsama* (semi-*tatsama*) words. These are the

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[1] Here "Sanskrit" is to be understood in the sense of the original "Sanskritic" languages, i.e., the Indo-Aryan.

Sanskrit words borrowed by the Prakrits in the secondary Prakrit stage and, having become naturalised, these have come down into the vernaculars. These have gone through all the phonetic changes needed in passing from secondary to tertiary Prakrits and are often, therefore, taken for *deśya* words. Thus the word राजा is a *tatsama* and the word राय is *tadbhava*; रजनी is *tatsama*, but रैन is a semi-*tatsama*.

But the influence of Sanskrit is not merely confined to the borrowing of words whether as *tatsama* or *tadbhava*. Sanskrit has permeated through and through the style of all Indian literature. In every Aryan language of India to-day there are writers who merely write Sanskrit with a few vernacular particles and verbs to join the whole together. This is particularly noticeable in Bengali,[1] in the so-called "High-Hindī" and in Gujarātī to-day. A famous writer of Hindī has said that "when a Hindī writer takes his pen in his hand, he ceases to be sober, and becomes Sanskrit-drunk".[2] In Gujarātī the main contention which engages Parsi and Hindu writers of the language is this same संस्कृतमय जडबातोड़ (sanskritised jaw-breaking) Gujarātī.[3]

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[1] Grierson (*LSI.*, I. 1, p. 152, ft. n.) has tried to parody in English a passage of sanskritised Bengali. He has used Latin equivalents for Sanskrit words. The result is rich and delicious. I have myself read through and understood a book written in Bengali after knowing the alphabet only. The amount of Sanskrit in it was quite enough. There is a healthier reaction now owing to the influence of Rabindranath Tagore.

[2] Quoted by Grierson, op. cit., p. 130.

[3] As an example I would like to quote from a well-known Gujarāti version of the *Bhagavad-Gītā*. I choose at random verse II, 13, and

Even greater is the force of Sanskrit *Grammar* in retarding the progress of the vernaculars towards analytic structure. The grammar of vernaculars as taught even to-day is merely Sanskrit grammar with vernacular words. All the cases and verbal forms of Classical Sanskrit, which, as a matter of fact, do not exist, are taught to the bewildered youth of our schools. The result is that there is an utterly unscientific and distorted idea of the mother-tongue produced in the mind of the learner. The essential difference, that Sanskrit is synthetic, while the modern language is largely analytic, is never brought out. After learning this sort of grammar in their childhood, it is not at all strange that our writers prefer the Sanskrit style.[1]

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give below the original and the "translation":

Original : देहिनोऽस्मिन्यथा देहे कौमारं यौवनं जरा ।
तथा देहान्तरप्राप्तिर्धीरस्तत्र न मुह्यति ॥

Translation : देहीने जेम आ देहे बाल्य यौवन ने जरा ।
त्हेवी देहान्तरप्राप्ति त्हेमां मोहे न धीर को ॥

I would much rather read the original Sanskrit !

As another delicious sample I would like to quote a version in "Gargantuan Gujarati" of the simple "Please, give me a pinch of snuff." It runs thus :

घ्राणे'न्द्रियसंबंधी शरीरना मज्जातन्तुमां आश्चर्यकारक व्याकुळता उत्पन्न करनारा खांडेला चूर्णनी चपटीओमां कृपया मारी हस्तांगुलीओने बोडवा देशो !

This is quite on a par with the various sayings attributed to Dr. Samuel Johnson. I am also reminded of the version of the well-known "Money makes the mare go" which runs :

"Pecuniary agencies have force,
To stimulate to speed the female horse.

[1] The same applies *mutatis mutandis* to Arabic and Urdu.

§ 194. *Outer languages, North-Western group: (i) Lahndā, (ii) Sindhī*

The "outer" languages of the Tertiary Prakrits may be divided into three groups, the North-Western, the Southern and the Eastern. Of those the North-Western consists of two languages spoken along the river Indus from the mountains to the sea. Both these show close connections with the Dardic languages and Grierson seems to think that this region shows an earlier substratum of Dardic on which the later Indo-Aryan was superposed. The main divisions of these are shown in Table XV.

Lahndā means west. It possesses a small literature of ballads and folk-songs. The northern dialects are spoken almost exclusively by Moslems. It merges into Sindhī very imperceptibly through Multānī. Sindhī has some literature mainly of a Sufi character. Modern Sindhī has also produced some good writers. It is notable that most of the Sindhī writers are Moslems and they use an alphabet derived from Arabic.

§ 195. *Outer languages, Southern group: (iii) Marāṭhī, (iv) Singhalese*

These are shown in Table XVI. The grouping of these two together is a matter of some doubt, for that really depends upon the position assigned to Päli among the secondary Prakrits. But as far as the modern languages are concerned these two are pretty close together. On the east Marāṭhī shades off insensibly into Oṛiyā, but on the west it does not thus pass into Gujarātī. The Parbhu dialect of Bombay shows admixture with Gujarātī, but it is confined only to *words* and does not encroach on grammar.

- Outer Indo-Aryan (i) North-western
  - Lahndā (West Panjābī)
    - Northern
      - Hindko (Peshāwarī)
      - Pothwāri
    - Southern
      - *Shāhpurī*
      - Multānī (→Sindhī)
        - Bhāwalpurī
        - Hindkā
      - Thalī
  - Sindhī
    - *Vicholī*
    - Siraikī
    - Lārī
    - Tharelī (→Rājasthānī)
    - Kacchī (→Gujarātī)

Table XV.—Outer Indo-Aryan Languages, (i) North-western.

(See § 194)

- Outer Indo-Aryan (ii) Southern
  - Marāthī
    - *Deśī*
      - Poona
      - Koṅkaṇ
      - Varhāḍ
    - Parbhu
    - Koṅkaṇī
      - Goanese
      - Mangalore
      - Ghāṭī
      - Other dialects
    - Berar dialects
      - Varhāḍī
      - Nāgpurī (→Eastern Hindī)
      - Halbī (→Oriya)
  - Singhalese
    - *Singhalese*
    - Māhī

Table XVI.—Outer Indo-Aryan Languages, (ii) Southern.

(See § 195)

As a matter of fact Bombay, like all big cities in India, is bilingual. In Marāṭhī the differences of dialects are negligible. The standard dialect and the colloquials seem to form two well-marked divisions. And even between these the differences are very trifling. Among the languages of India it is the most uniform and uses the smallest proportion of *tatsama* words. A very large number of words are pure *deśya* or *tadbhava*. Marāṭhī possesses a fine literature almost as extensive as Bengali. It goes back to the 13th century when Jnāneśvar wrote his magnificent commentary, the *Dnyāneśvarī*[1], on the *Bhagavad-Gītā*. This work and the songs of the other saints, Namdev, Tukārām and Eknāth, have given to the language a unity which persists even to-day. Modern Marāṭhī literature is also very extensive and covers every branch of human thought. Marāṭhī ranks third among the three great literary languages of modern India, the other two being Tamil and Bengali.

The three forms of the standard Marāṭhī (*Deśī*) are merely local varieties of one dialect. The Parbhu dialect is spoken by the Marāṭhā official class of Bombay, who are a cultured people. Their language is largely mixed with Gujaratī words. In the Koṅkaṇ and along the Western Ghāts Koṅkaṇī is spoken. It shows a good deal of Dardic influence and also of Non-Aryan languages.[2] One variety of Koṅkaṇi is the Goanese which shows a large number of Portuguese words, because Goa has been under Portugal during quite four hundred years. The Ghāṭī dialect is spoken by the hillmen of the Western Ghāts.

Singhalese has a literature concerned with Buddhist theology. Its dialects are spoken all over Ceylon. Māhī is the language of the Maldiv Islands.

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[1] This is how the name is actually pronounced in Marāṭhī.

[2] Some scholars would like to put Koṅkaṇī between Gujarātī and Marāṭhī, though it traces its origin like the latter from Mahārāṣṭrī Prakrit.

§196. *Outer languages, Eastern group: (v) Behārī, (vi) Oriyā, (vii) Bengali, (viii) Assamese*

All these are derived from Māgadhī; and among them Bengali and Assamese are very close together. They all pass from one to the other quite insensibly. Behārī is divided into two sharply defined groups: Maithilī and Bhojpuriyā. There are also well marked ethnic differences between the speakers of these groups.[1] The latter are the more virile tribe and their dialect reflects their sturdy character. Maithilī possesses a certain amount of Vaiṣṇava literature going back to the 15th century.

Oriyā has a small literature and though there are some dialects, these are not appreciably different from the standard dialect.

Bengali is perhaps the most important of the modern Indo-Aryan languages and being the easternmost[2] it is the most analytic of all. Its literary dialect is almost entirely sanskritised. It shows considerable variety of spoken dialects which are very markedly different from the artificial language of letters. Bengali literature is very extensive and varied, and the language at the present moment is in the interesting condition of undergoing a renaissance. The tendency to-day is distinctly to lessen the slavish adherence to Sanskrit. Rabindranath has done his best in this direction and others are following him.

Assamese too has a good literature which is mainly historical. This is legacy from the days of Ahom supremacy. The language differs but little from Bengali, the chief differences being phonetic. Table XVII indicates the various sub-groups and dialects of these four languages.

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[1] Grierson (op. cit., pp. 150 f.) discusses this question well.

[2] If we regard Bengali-Assamese as one sub-group.

- Outer Indo-Aryan (iii) Eastern
  - Behāri
    - Bhojpurī (Western)
      - *Bhojpuriyā*
      - Purabī
      - Nāgpuriā
    - Maithilī (Eastern)
      - *Maithilī* (or Tirhūṭiā) (→Bengali)
      - Magahī
  - Oriyā
    - *Oriyā*
    - Northern dialects (→Bengali)
    - Bhatrī (→Marāṭhī)
  - Bengali
    - *Bengali* (Literary)
    - Spoken Dialects
      - Rāḍha (Western)
        - *Calcutta dialect*
        - Purnea (→Behārī)
        - Midnapore dialect (→Oriyā)
      - Vārendra (Northern)
      - Vanga (Eastern)
        - *Dacca*
        - Haijong (→Tibeto-Burman)
        - Chākmā (→Burmese)
      - Kāmrupa (→Assamese)
  - Assamese
    - *Eastern Assamese*
    - Māyāng (→Bengali)
    - Jharevā

Table XVII.—OUTER INDO-ARYAN LANGUAGES, (iii) EASTERN.

(Facing § 196)

Mixed dialects of Bengali and Assamese arose as a necessity in order to keep up communication with the numerous aboriginal tribes. One of the most interesting of these is the Jharevā dialect of Assamese which is a regular "pidgin", made up of Bengali, Gāro and Assamese.

§ *197. The Mediate language*: (*ix*) *Eastern Hindī*

This division of Indo-Aryan consists of only one language and it rises out of Ardha-Māgadhī. It is important on account of its position, standing as it does as a connecting link between the Outer and the Inner languages. Even greater is its cultural importance. Its literature consists of some very fine poetry, and in the *Tulsī-Rāmāyaṇa* it possesses one of the great books of humanity. Its dialects are shown in Table XVIII.

Through the *Tulsī-Rāmāyaṇa* the influence of this language has spread all over India. Grierson regards Tulsīdās as one of the greatest writers of Asia and regards this work as "the perfect example of the perfect book". The influence of the book has been steadily increasing, and to-day it is the accepted scripture of nearly a third of India. It has appealed to the heart of India as no book has ever done. There are other works, too, in the Awadhī dialect, one of the most remarkable being the *Padumāvat* of Malik Muhammad Jāyasī, a Moslem. It is a magnificent poem of Rajput chivalry all the more remarkable as coming from the pen of a Moslem.

§ *198. The Inner languages, Himalaya group*: (*x*) *Pahāḍī*

The Inner languages are divided into two groups, the Himalayan and the Central. The Himalayan languages of

Intermediate Indo-Aryan (Eastern Hindi)

- Awadhī (→ Western Hindī)
  - *Awadhī*
  - Baghelī
- Chhattisgaḍhī (→ Oriyā and Marāṭhī)

Table XVIII.—Mediate Indo-Aryan Languages.
(See § 197)

Inner Indo-Aryan (i) Himalayan (Pahāḍī)

- *Nepali* (Khaśkura or Gorkhālī)—Palpa
- Central Pahāḍī
  - Kumāonī
  - Gaḍhwālī
- Western Pahāḍī

Table XIX.—Inner Indo-Aryan Languages, (i) Himalayan (Pahāḍī).
(See § 198)

the Indo-Aryan branch had penetrated there at a comparatively late period. In the east of Nepal one of the Maithilī dialects had penetrated somewhat earlier than the Inner languages did. These are divided into three groups as shown in Table XIX.

These languages have been borrowing much from the vocabulary of the Tibeto-Himalayan dialects, but these latter are being rapidly driven out by the Aryan Pahāḍī Nepālī possesses a small literature; but for the others the literary language is the Hindostānī dialect of Western Hindī.

§ 199. *The Inner languages, Central group*: (*xi*) *Western-Hindī*, (*xii*) *Rājasthānī*, (*xiii*) *Forest dialects*, (*xiv*) *Gujarātī*, (*xv*) *Panjābī*

These are shown in Table XX. Only one of the languages of this group, Western-Hindī, is a direct descendant of the Midland Prākrit, Sauraseni. Western-Hindī has a fine literature of considerable antiquity. The earliest writer mentioned is Amir Khusro. This literary dialect has clearly split into two--Urdu and Hindī—the former taking its vocabulary from Irānī and Arabic and the latter from Sanskrit. Unfortunately this difference has been much emphasised of late for political purposes and the differences between Hindī and Urdu have been made part of the Hindu-Moslem trouble. Urdu literature first arose in the Deccan where the language developed certain peculiarities and was known as Dakhṇī (southern) as opposed to Rekhtā (northern). Other dialects of Western-Hindī have also developed literature, especially the Braj-Bhākhā. This latter centres round the Kṛṣṇa-cycle of tales, just as Awadhī deals with the Rāma-cycle.

Rājasthānī group (Rājasthānī, Forest dialects, Gujarātī)

- Inter Indo-Aryan (ii) Central
  - Pure Inner
    - Western Hindī
      - Literary
        - *Urdu*
          - Rekhtā (Delhi, Lakhnow)
          - Dakhṇī (Heiderabad)
        - *High Hindī* (Benares)
      - Colloquial Hindostānī (→Panjābī)
      - Bāngaru (→Rājasthānī)
      - Midland dialects
        - Braj-Bhākhā (→Rājasthānī)
        - Kanaujī (→Eastern Hindī)
        - Bundelī (→Rājasthānī)
    - Rājasthānī
      - Mārwāḍī
        - Thalī (Mārwāḍī)
        - Mewāḍī
      - Central
        - Jaipurī
        - Hārautī (→Western Hindī)
      - North East
        - Mewāṭī
        - Ahīrwaṭī
      - Mālavī
        - Rāngrī
        - Nimarī
      - Lambhanī (Banjārī)
    - Forest dialects
      - Bhīl dialects
        - Bhīlī
        - Siyalgiri (Bengal)
        - Baorī (Punjāb)
      - Khāndeśī
  - Superposed on Outer
    - Gujarātī (South)
      - Literary
        - *Bombay* (Parsi)
        - *Ahmedabad* (Hindu)
      - Colloquial
        - Bombay (Mixed)
        - Ahmedabad
        - Surat
        - North Gujarāt dialects
        - Kāṭhiāwāḍī
    - Panjābī (West)
      - *Amritsar*
      - Ḍogrī

Table XX.—Inner Indo-Aryan Languages, (ii) Central.

(Facing § 199)

The others have arisen from other varieties of Prakrit under the strong moulding influence of Saurasenī. The country round Delhi was the centre of Hindu chivalry and culture just before the Islamic invasions began. The modern dialects of Rājasthānī have spread throughout Rajputana as a result of the conquest of Delhi by the Moslems. In Gujarat and in the Panjab the Inner Languages were superposed on a basis of Outer Languages. The Forest Dialects are more or less varieties of Rājasthānī; and Gujarātī also is very closely connected. In fact it is not possible to distinguish between Old Gujarāti and Old Rājasthānī.[1] In Rājasthānī there is a valuable literature consisting of chronicles, ballads and tales from the Kṛṣṇa-cycle.

Gujarātī literature goes back to quite the 14th century and even before that Gujaratis were known for their literary activities in Prakrit, especially in works of Jaina theology. Hemacandra, the great Prakrit grammarian, was a Gujarati. Gujarātī literature to-day is showing signs of renewed vigour and fortunately the sanskritising tendencies show distinct signs of waning. One branch of Gujarātī—Kāṭhiāwaḍī—possesses a good number of bardic chronicles and ballads, as yet not committed to writing. These present a very interesting aspect of the language. Jhaverchand Meghāṇī and other have done valuable work in editing some of these Kāthiāwāḍ ballads and bardic chronicles.

In Panjābī there is a fair amount of literature, mostly Sikh, and the language is closely akin to Western-Hindī. The different dialects are shown in the table.

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[1] For instance the poems of Mīrā are as much Gujarātī as Rājasthānī.

§ 200. *Argots*

Many of the languages mentioned above have developed a special slang or argot, which is used habitually by certain classes for secret conversation when there is fear of being overheard. A great many such are languages of criminal castes or tribes, and these follow more or less the same methods as the "thieves' slang" in English and German and the argot of the Apaches of Paris. The Pindharis and Thags had their special slang in order to beguile unsuspecting victims.[1] There are a variety of ways of twisting and transforming the words. Sometimes by inverting a word, sometimes by using extra syllables in the body of a word, by reduplicating certain syllables, by adding extra letters initially or finally the words are transformed entirely beyond recognition. A good specimen from the Chūhṛā dialect of the Panjab is given by Grierson.[2] These argots are based on Indo-Aryan or Dravidian languages. Every caste and every trade-guild has got its own slang. The Parsi argot of Bombay and elsewhere is either complete inverson of each word or by a peculiar reduplication with an inserted *s* and *m*[3]; e.g., संभालजो पेलो समजे छे (take care, that fellow understands) may become जोलभसं लोपे जेमस छे or सम्‌संभालजो पेस्मेलो सस्ममजे छेस्मे. Various devices are used by shopkeepers to indicate prices to each other without their customers becoming aware of what is meant. Some use the terms used for dice. The Parsis have a name for each of the thirty days of the month and these names are often used for the numbers one to thirty.

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[1] Meadows Taylor in his *Confessions of a Thug* gives numerous instances of this. For instance, the innocent phrase *pān lāo* (bring *pān*) was the signal of death.

[2] *LSI.*, I. 1, pp. 188-189.

[3] This is called the सख्खानी बोली (the *s*-slang).

§ 201. *The unclassified Languages of India*

There are two languages spoken in Burma whose exact positions are not quite clear—*Karen*[1] and *Man.* Both show certain connections with Chinese. The word *man* in Chinese means "a southern barbarian", and is applied to the people and the languages of certain wild tribes on the borders of China and in the wild forest tracts of Indo-China in the neighbourhood.

Burushaskī or *Khajunā*, which is spoken on the extreme North-West Frontier, defies classification among any of the known languages of India. Some think it may be an ancient and distant relative of the Muṇḍā with an overlying Dravidian influence. The region where it is spoken has been the road along which numerous peoples have passed into India and so we may expect there seom form of speech which defies classification.[2] The Burushaskī is a pronoun-incorporating speech, with different forms for addressing an equal, a superior gentleman and a superior lady.

The *Andaman* language also has as yet defied classification. It is an extremely limited kind of agglutinating speech. The ideas to be expressed are very elementary and most of the speech is "eked out by a free use of gesture".[3]

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[1] See below Chapter XIII, § 251.

[2] It has been suggested (see *LSI.*, I. 1, p. 192, ftn. 3) that this language may be the last remnant of a pre-Dardic form of speech in that region.

[3] Op, cit., p. 192.

CHAPTER XII

THE INDO-EUROPEAN LANGUAGES

§ 202. *Chief characteristics of the Indo-European family*

While considering the chief types of language, we have already noted in some detail the main distinguishing characteristics of the Indo-European family.[1] It may be just as well to recapitulate them here once again:

1. Suffix inflection.
2. Originally synthetic in structure but getting more and more analytic in course of development.
3. Words built from monosyllabic roots with the addition of primary and secondary suffixes.
4. Syntactical prefixes unknown.
5. The power of making true compounds.
6. Vowel-gradation.
7. Flexions in great variety.

This family is the only one of the inflecting type in which the flexion is external and the root is dynamically invariable.[2]

§ 203. *The name "Indo-European"*

This family of languages has been called by various names. The older name favoured by Max Müller and even now used loosely by certain writers was the name *Aryan.* In course of time it was found more practicable to restrict this name to the oldest[1] branch of this family, the Indo-Iranian—to the languages, namely, of those peoples who called themselves by the proud name of *Arya*[2]. The name *Indo-Germanic* (now used chiefly by German scholars and a few others outside Germany) was coined at a period when Indian languages in the east and Germanic in the west marked the bounds of this family. But since that period new branches have been recognised, and Keltic now forms the western limit[3]. It is obviously impossible to keep on changing names as the limits extend further. The name *Indo-European* is accepted now by practically all English and most of the non-German European writers and might be admitted as being the least open to objection, for it does not so much suggest the termini as the two great land-masses in which these languages predominate.[4]

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[1] Chapter III, § 25, above.

[2] Except within the limits of Ablaut and Vowel-gradation and even there it happens only in a certain number of cases and not as an invariable rule.

§204. *The twofold division of Indo-European into* **centum** *and* **śatam** *groups*

The Indo-European languages are divided into two main groups known as the *centum* and the *śatam* (शतम्) groups. So far this division line is the most clearly marked, and there is no overlapping, nor any neutral region, where characteristics of both groups might be found, as is almost invariably the case with other linguistic divisions.

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[1] "Oldest" here implies that this branch possesses the oldest literary records.

[2] Skt. आर्य, Av. *airya*, O. Pers. *ariya*.

[3] The name *Indo-Keltic* had been once suggested but was not accepted.

[4] *Sanskritic*, *Caucasian* and *Japhetic* (on analogy of Semitic and Hamitic) are open to obvious objections.

These two groups are mutually exclusive. This division line was first clearly made out by Ascoli in 1870. He pointed out that the parent Indo-European speech possessed a set of palatal sounds.[1] Of these the k̑ had a twofold development in the various branches. In one group it developed into the *velar*[2] or *k*-sound and in the other group it developed into a *sibilant*, i.e., a *ś*- (श्) or *s*- (स्) sound. And these two divisions were named after the typical word illustrating this, the word for "hundred," which goes right through all the Indo-European languages.

Thus; I.-E. **k̑m̥tom*; Latin *centum*,[3] Greek *hé-katon*, Old Irish *cēt*,[4] Gothic *hund*,[5] Tokharian, *kandh*; Sanskrit शतम्, Avesta *satəm*, Lithuanian *szimtas*, Russian *sto*.

When this twofold division was first formulated by Ascoli it was thought that this division marked out the Western and the Eastern languages. But the discovery and decipherment of Tokharian and Hittite upset this idea, because, though *centum*-languages, they are found far to the east.

Table XXI (p. 271) shows the various branches of the Indo-European family.

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[1] Represented usually as *k*, *k͡h*, *g̑*, *g͡h*.

[2] It is better to speak of *velars*, as the term indicates the point of contact. See above §96.

[3] Note that I.-E. *k̑* was represented in Latin by the letter *c*, hence pronounce *centum* as केन्तुम् (*not* सेन्टम्).

[4] Pronounce केत्.

[5] The *h* Gothic is to be pronounced like the *kh* in Persian. The change from *k* to *kh* in the Germanic group is explained by "Grimm's Law". See Chap. VIII, §§ 121ff.

INDO-EUROPEAN LANGUAGES

- Indo-European Languages
  - *Centum*-group
    - 1. Keltic
    - 2. Germanic (Teutonic)
    - 3. Italic
    - 4. Greek (Hellenic)
    - 5. Hittite
    - 6. Tokharian
  - *Satam*-group
    - 7. Albanian (Illyrian)
    - 8. Letto-Slavic (Balto-Slavic)
      - 8a. Lettic
      - 8b. Slavic
    - 9. Armenian
    - 10. Aryan (Indo-Iranian)
      - 10a. Iranian
      - 10b. Dardic
      - 10c. Indian

Table XXI.—Branches of Indo-European.

(See § 201).

§ 205. *The branches of the Indo-European family and their mutual relations*

The Indo-European family is a very widely spread family and includes a large number of languages. Necessarily, therefore, the mutual relations between these various branches would be very varied and complex. Every branch has a point of contact with each of the rest, and hence if we desire to bring out even only the main points of resemblance graphically, we cannot do so by means of a "genealogical table". The limitations of a "family-tree" arrangement would convey the false notion that the extremes, at any rate, have nothing in common and except for the various divisions of any one branch it would not convey any information regarding the very intimate relations which hold all these branches together.

Fig. 17 (p. 274) shows in a very rough manner (and only in regard to a few points), how complex the inter-relations actually are. It shows the various connections in a twofold manner, because it is partly geographical (at any rate going from west to east) in addition to showing the various relationships.

§ 206. *The Keltic branch*

This branch was of wide extent at one time and had spread as far east as Galatia in Asia Minor. At present it is only confined to the extreme west of Europe. Even there it is gradually becoming extinct. These languages are divided into two principal subdivisions, the *q*-Keltic and the *p*-Keltic. This distinction is based on the fact that a *q*- (or *k*-) sound in one group is represented by a *p*-sound in the other: thus, I.-E. **peŋqu̯e*[1] becomes in

[1] Which gives Skt. पञ्च.

Welsh *Pump* and in Irish *coic*. Besides these two main subdivisions, the ancient language of Gaul[1] called the Old Gaulish or Gallic is included in this branch. Some of the Keltic languages are distinguished by the development of a strong stress accent resulting in the dropping of vowels[2] and consequently it is often very difficult to recognise a word or a form as I.-E. The noun declension too, has been almost entirely replaced by prepositional analysis.[3] In fact, owing to these peculiarities this group was long regarded as being outside the I.-E. family.[4] These languages show a surprising affinity to the Italic branch. These two branches "stand much closer than any other pair of the I.-E., except the Indo-Iranian pair".[5]

The chief languages of the Keltic branch are shown in Table XXII.

Irish (or Erse) is a language with a considerable ancient literature. The Old Irish Glosses Würzburg, and other ancient documents have furnished enough material for a reconstruction of Old Irish Grammar. Modern Irish begins from about the beginning of the 17th century A.D. In quite recent days the patriotic outburst in Ireland has given fresh strength and a new lease of life to the language. Scotch Gaelic and Manx are now nearly extinct.

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[1] Known to us through place names and from a few coins and inscriptions, as also a few words quoted by ancient authors. This tongue was carried by the Gauls into Asia Minor when they expanded eastwards about B.C. 280.

[2] This happens notably in the Welsh, in which the words appear at first sight to be a mass of consonants. See also above §§ 133 134.

[3] Thus the Britannic subdivision possesses only one case form.

[4] See above § 203.

[5] *Encyclopaedia Britannica* (Cambridge edition), art. "Celtic Languages".

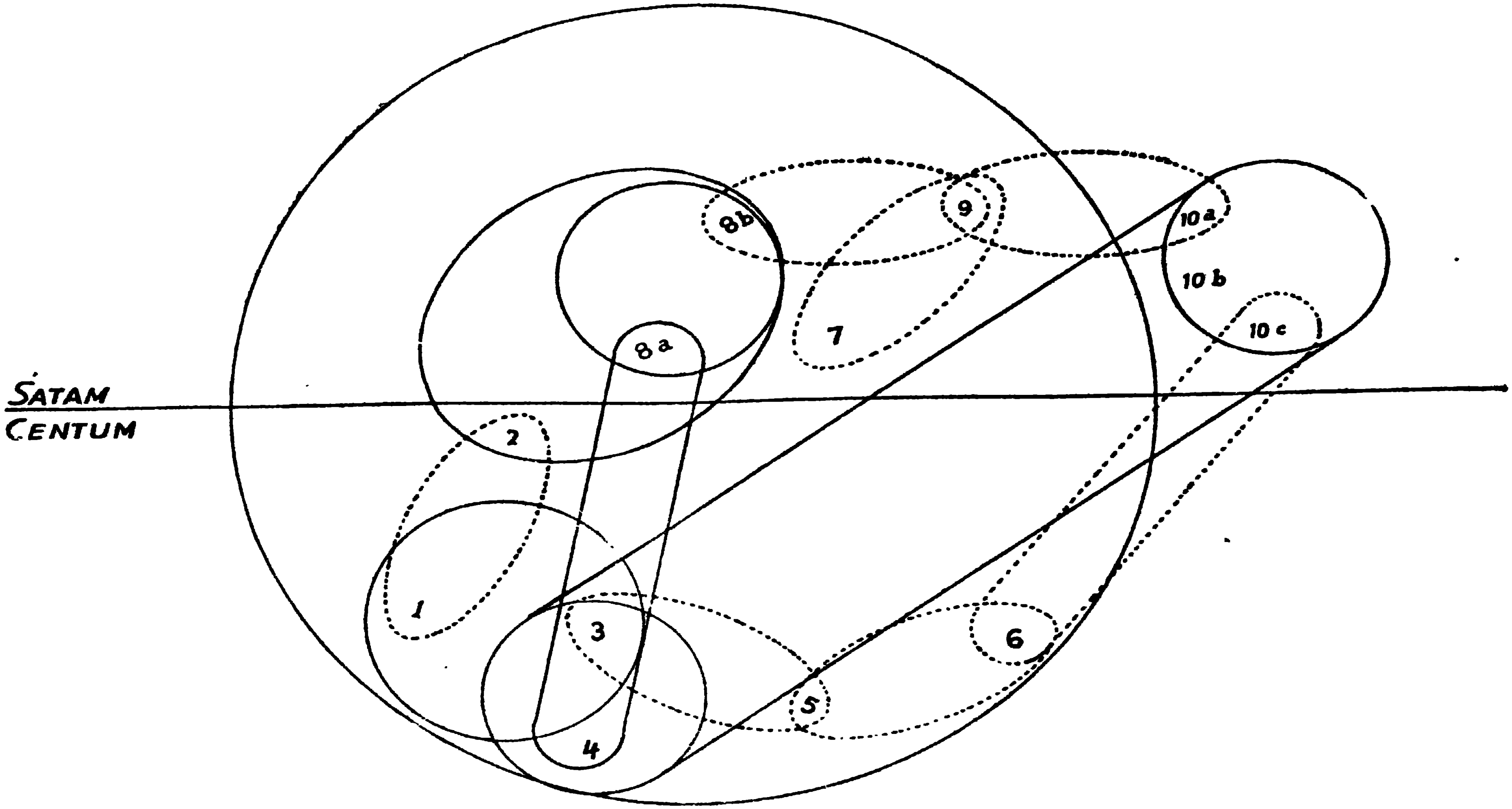

Fig. 17.—Inter-relation of Indo-European Languages

EXPLANATION OF FIG. 17

The number in this diagram correspond to those given in Table XXI. Broken lines indicate that the connections are suspected but have not been quite clearly made out. The line through the middle divides the *śatam* and the *centum* groups.

The big circle includes the branches in which I.-E. **a*, **e* and **o* are preserved distinct and separate.

1-3 (Keltic-Italic)—Passive in *-r*.

3-4 (Italic-Greek)—Gen. sing. of *-o* stems generalised.

3-4-8a (Italic-Greek-Lettic)—Nom. plu. in *-oi* or *-ei*.

2-8a-8b (Germanic-Letto-Slavic)—Indo-European **bh* changes to *m*.

3-4-10a-10b-10c (Italic-Greek-Aryan)—Imperative 3rd pers. plu. ends in *-onto*, अन्तु.

8a-8b Letto-Slavic branch.

10a-10b-10c (Aryan branch)—रलयोरभेद:

- Keltic Languages
  - Island Keltic
    - Gaelic (Goidelic) (*q*-Keltic)
      - Irish (Erse)
      - Scotch-Gaelic
      - Manx
    - Britannic (Brythonic) (*p* Keltic)
      - Welsh (Kymric)
      - Cornish
      - Breton (Armorican)
  - Continental Keltic—Old Gaulish (Gallic)

Table XXII.—Keltic Languages.

(Facing § 206)

Kymric (or Welsh) is in many respects the most important among the Keltic languages. It also shows the chief features of this branch quite clearly. It is a living and a vigorous language spoken by about a million people and it is being extensively and zealously cultivated. Its oldest records go back to the 8th century A.D., and its best literature was produced between 1000 and 1300 A.D. Cornish is now quite extinct, the last speaker of it having died in 1770 A.D.

Breton (or Armorican) seems to have been in reality a dialect of Cornish taken by the Britons of Cornwall to the north of France, when they had to leave their homes being hard pressed by the Saxons. The language is spoken today by many people in the various districts of north-western France.

Old Gaulish (Gallic) was at one time a very extensively spread language. It died out quite early in the Christian era. In the first and the second centuries B.C. the Gauls had spread over the whole of western and south-western Europe. Thence, through Central Europe they had penetrated up to the Black Sea. Then they crossed over the Bosphorus into Asia Minor, where they gave their name to the province of Galatea. Their language is known to us through many inscriptions.

§ 207. *The Germanic (or Teutonic) branch*

This is perhaps the most widely spread branch of the Indo-European today and one of the languages of this branch, English, promises to be the World-Language of the future.[1] The history of this branch from the time of the earliest extant records up to the present day shows very clearly the progress from synthetic to analytic structure. These languages have also developed a fairly strong stress accent chiefly on the initial syllable; only one of these, Swedish, has a pitch accent. These languages show a remarkable set of consonantal sound-shiftings when compared with the other branches of the Indo-European. The first sound-shifting, which had occurred in prehistoric ages, had been noticed by Rask, but it was Grimm who first enunciated these shiftings clearly. Hence these laws of Germanic sound-shifting have been associated with the name of Grimm. This first sound-shifting marked out the West Germanic from the other branches. Later on, about the 7th cent. A.D., there occurred a second sound-shifting, this time among the West Germanic languages alone, which divided them into two groups known as Low-German and High-German. The history of "Grimm's Law" and its gradual evolution from a rough statement with a great many exceptions to the dignity of a "phonetic law", which has no exceptions, forms an instructive chapter in the history of Comparative Philology.[1]

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[1] See Appendix B.

Table XXIII shows the principal divisions of the Germanic branch.

Gothic is the oldest Germanic language of which we possess written records.[2] The *Gothic Bible* of Bishop Wulfilas (A.D. 311-381) is the earliest Germanic work we possess. The language is much influenced in its syntax by Greek, which was used at that time by the Orthodox Christian Church to which Bishop Wulfilas belonged. The main structure, however, is purely Germanic, and the language is essentially synthetic. It retains most of the nominal inflections and has a very rich variety of verbal

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[1] See Chap. VIII above, §§ 121-126.

[2] Jespersen calls this branch "Gothonic".

forms. It also possesses the dual number. Among the Germanic languages Gothic approaches Sanskrit the closest. Tetraxid or Crimean Gothic was spoken till about the 18th century in the Crimean peninsula. Of the older languages Vandal (in North Spain), Lombard (in North Italy) and Burgond (in Burgundy) were probably allied to Gothic. But they became extinct quite early and were replaced by Romance languages.

In the Original Norse (Urnordisch) there have been found some very ancient runic inscriptions. These belong to the third century of the Christian era and are scattered over Sweden, Norway and Denmark. Old Norse represents a later development of the language of these Runic inscriptions. This branch is usually called Old Icelandic because it is best preserved in the Icelandic *Eddas*. These epics were composed about A.D. 700 and were committed to writing in their final form about A.D. 1500. They are mythological epics of great value. Originally they had doubtless been transmitted orally from generation to generation. They seem to have been collected first about A.D. 1200. Two such collections are known to us, the *Elder Edda* which is in verse, and the *Younger* (or *Snorra*) *Edda* which is in prose.

About the North Germanic languages Tucker is of opinion that "it is probable but not provable that the Norse (or Scandinavian) languages were carried into the northern peninsula partly in the eastern direction round the Gulfs of Finland and Bothnia and partly in the western, through Denmark as well as across the Baltic".[1] All the modern Scandinavian (North Germanic) languages possess good literatures going back to several centuries. Since the beginning of the 19th century, however, there has been a great literary activity going on in all the four branches of these languages and some of the best writers of the world are to be found among them. The very closely intertwined history of these northern lands has brought about a very close resemblance among their languages also. Norwegian and Danish might almost be regarded as dialects of the same language. Swedish differs a bit more from either of these and possesses a clear pitch accent as distinguished from the very strong stress of the other branches of the Germanic. Very probably this pitch accent of Swedish is a survival from the ancient Norse.

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[1] Tucker, *Introduction to the Natural History of Language*, p. 214

The Normans (Northmen) carried Old Norse with them into the north of France, when they migrated there under Rolf, the Sea-King. There the language became grafted on to the local Romance dialect and this mixture gave the rich Norman French, which later played such a prominent part in the development of Middle and Modern English.

In West Germanic there are the two main groups, Low German and High German with an intermediate group called Middle German. These names refer to the physical peculiarities of the regions where these are spoken. Low German dialects are spoken in the lowlands of north Germany, while High German originated in the highlands of the south.

The Low German speaking Angles and Saxons invaded Britain and their dialects combined to produce Anglo-Saxon (or Old English). Of its four principal dialects the Northumbrian developed into modern Lowland Scotch.[1] Among the dialects of Old English the most important was that of Wessex (or West Saxon), the district round Winchester, which became the capital after the establishment of the Saxon supremacy under Egbert (A.D. 800-836). Under the fostering care of Alfred the Great (A.D. 871-901) many literary works were produced in this dialect. After the Norman conquest the political centre shifted to London and so the Mercian dialect became more important and formed the basis of Middle English. Modern English is the most widely spread language in the world today and it promises to become in the near future the "World Language".[1] American is a special development of English reflecting in its vocabulary and its racy idiom the spirit of the new and virile American race.

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[1] To distinguish it from "Highland" Scotch or Gaelic which is Keltic.

Old Frisian is known from some literary remnants. At the present time it is almost extinct, being confined to a few localities in Schleswig and in the bordering islands.

The Saxon on the Continent is the principal Low German language. It has gone on developing and has produced a fair amount of literature at all periods. The *Heiland*, an epic poem in Old Saxon, is the oldest literary work in Low German. At the present time the chief Low German dialect is Platt-Deutsch and it is the chief vernacular of northern Germany. It is still being used for literary purposes.

Low Frankish dialects developed mainly in the Netherlands. Among its dialects Dutch and Flemish have produced good literatures.

The group of dialects known as Middle German or Frankish are a sort of bridge between Low and High German. These dialects are spoken chiefly along the Rhine,—Ripuarish round about the city of Köln (Cologne), and Middle Frankish round about Trier.

The dialects of Old High German mentioned in the table are the most important known. Old High German literature extends from the 8th to the 12th centuries.

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[1] See Appendix B.

Middle High German represents mainly the Swabian dialect. This was the dialect spoken at the Imperial court of the Hohenstaufens of Swabia. Middle High German has produced a very considerable literature of very beautiful love-lyrics (the *Minnesang*) as well as the great German epic, the *Niebelungenlied*. By that time the language had lost a great part of its original wealth of inflections.

Modern German may be said to have begun with Luther's *German Bible*.[1] The modern form of German still retains its typical Germanic structure, even though it possesses a large proportion of foreign loan words. In the matter of flexions Modern (High) German is much more elaborate than any Low German language or dialect. Hence too the syntax and word order are of a more archaic type than, say, in English or Dutch. Phonetically also modern German is closer to the older type. Its most marked characteristics are the numerous word-building suffixes and its extraordinary facility for building compounds.

§ *208. The Italic branch*

The Italic branch is, like the Keltic, divided into *p*-Italic and *q*-Italic and for the same reason. Thus, I.-E. **peŋ̍qu̯e* gives Oscan *pumperias* and Lat. *quinque*. The *p*-group contains many of the languages of ancient Italy,[2] which were replaced by the language of Rome at a very early date[1]. The spread of Roman domination was the chief cause of the spread of Latin, the dialect of Rome. This is the only ancient *q*-Italic language known to us. The history of the spread of Latin in its various stages, Old Latin, Classical Latin and Neo-Latin, is closely bound up with the history of Rome. In the far flung political empire of Rome there grew up in course of time a common language, the *Lingua Romana*, which began to show dialectical and provincial differences even in the days of Roman supremacy. With the fall of Rome the *political* supremacy of Latin disappeared and in each of the Roman provinces the *Lingua Romana* developed differently in accordance with the different environments and conditions in each. Thus arose the great Romance languages of Europe, of which most have had a splendid literary and national history But even after the break up of the Roman Empire, Latin continued to exercise a profound influence on all the languages of Europe through the spiritual empire of Christendom as represented by the Roman Catholic Church. Romance Philology has been studied in the West most carefully and in great detail, and many of the questions of linguistic development are clearly explained by the history of the development of the Romance tongues. The history of the development of these from Latin is in miniature the history of the development of the various branches from the I.-E. parent-speech. The existence of cognate Italic dialects had considerably affected Latin grammar, notably in its phonetic portion. It is not easy to formulate a table of phonetic equivalents for Latin. Unfortunately the amount of knowledge we possess about the non-Latin dialects of the Italic branch is not enough to enable us to judge accurately in what degree Latin was altered by contact with them. Latin is far less rich in variety of inflection and forms than Greek, but still the resemblances, in the synthetic stage, to other branches of I.-E. are very striking indeed. Classical Latin, however, was full of conscious Graecisms (especially in the syntax), because the Greeks had been the teachers of the Romans in the art of letters and in civilisation. The history of Latin also shows an advance from synthesis to analysis, which is well marked even before the Romance languages definitely branched out. Latin from the time of the earliest records has shown signs of a stress accent, which in course of time became more or less regular on the penult.

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[1] See Behagel's *History of the German Language* (English translation by E. Trechmann), pp 1-86, for more details about the growth of Modern German.

[2] Among the non-Italic languages of ancient Italy were the Etruscan, Messapian and the dialects of the Greek colonists in Italy. Ligurian and Venetic were also non-Italic languages.

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[1] Oscan survived in south Italy till the 1st cent. B.C. and even for some centuries later in the mountains.

Table XXIV shows the important Italic dialects.

Oscan was an important language in South Italy. It is known through about a couple of hundred inscriptions, the most important of which is a bilingual tablet in Oscan and Latin. These belong mostly to the last couple of centuries before the Christian era. Umbrian is known through seven tablets, the *Eugubine Tablets* (probably about B.C. 200). From these we have been enabled to know about a thousand words and grammatical forms. Umbrian extended all over North Italy at an early date. There are some other varieties of *p*-Italic such as Palignian and Marrucini, but we have very scant information about them.

Latin is the only language of importance of the *q*-Italic group known to us. It was originally the dialect of Rome and the surrounding district. It was closely connected with the dialects of Falerii, Praeneste and Lanuvium. The oldest Latin writings go back to the 6th century B.C., though most of the Old Latin inscriptions

are from somewhere about B.C. 300. Classical Latin has got a really splendid literature commencing from the third century B.C. and continuing for over four hundred years. Deliberate attempts made to imitate the earlier Latin writers and the models of Classical Greek has made the literature of the later classical writers of Rome very stilted and artificial. This led to a greater and greater divergence from the language of the masses. This appears to be an exact parallel to what happened in India with respect to Sanskrit and the Prakrits. Vulgar-Latin (also called Neo-Latin) was the vernacular of the common people of Rome during the days of the Empire. There were necessarily many dialects which bore to Classical Latin the same relationship as Sanskrit did to the various Prakrits. This Vulgar (or Neo-) Latin is to be carefully distinguished from Low-Latin (also called Dog-Latin), which was a hybrid and stilted jargon used by the half-educated monks of the middle ages.

When the Roman legionaries conquered other countries they carried thither their Vulgar Latin with them. In each land this was called the *Lingua Romana*, and this became the common language all over the Roman Empire. In course of time it developed in each land into a separate language, its course being determined by the people of that land and their subsequent history. In this way the *Lingua Romana* became the parent of the modern Romance languages. There are seven living Romance languages and several that are extinct.

Roumanian is the easternmost of the Romance Languages. It has a large admixture of borrowed words, 40 per cent being from Slavic and 25 per cent from Greek, Turkish and other sources, only the remaining 35 per cent are of pure Latin origin. The article is *suffixed* as in

Bulgarian, e.g., *omul* (the man), Lat. *homo ille*. There are three distinct dialects: Roumanian proper which is spoken Roumania itself, Macedo-Roumanian spoken in Macedonia and Greece, and Istro-Roumanian spoken in places in Istria. The last two are very mixed dialects. The oldest literary remains in Roumanian are translations of the Psalms dated about A.D. 1482.

Rhaeto-Romanic (also called Rhaetian) has a scanty literature going back to A.D. 1380. It is spoken in the Swiss Alps along the boundaries of France and Italy. There are three dialects distinguishable spoken in Girsons, Tyrol and Friuli.

Italian can be divided into three clear sub-groups: 1. Sardinian, spoken in Sardinia and Corsica ; 2. Gallo-Italian, spoken in North Italy and possessing many dialects ; and 3. Italian proper. This last has several important dialects such as Tuscan, Roman, Sicilian and Neopolitan. The first named has become the parent of the standard literary language because, it was the language of Dante. Italian has got a very fine literature going back to A.D. 964. Being thus one of the oldest cultivated languages of Europe and inheriting to a large extent the great name of Rome, Italian literature has profoundly influenced many learned writers in all countries of Europe. Italian is also spoken outside Italy where it has undergone strange transformations. Thus Maltese spoken in Malta is a hybrid made up of Italian superposed upon Arabic.

Of all the Romance languages French seems to have remained most uniform throughout. The main reason for this has been the political and intellectual domination of Paris all through French history. The dialect of the île de France (of which Paris is the centre) has become the dominant standard language of France. The descendant of Vulgar Latin in North Gaul was called *Langue d'oïl* in contrast with the *Langue d'oc* of the South. These queer names were derived from the words of affirmation in these two branches—*oïl* (modern *oui*) in the North and *oc* in the South.[1] There were four main dialects of the *Langue d'oïl*—Norman, Picard, Burgundian and French. The last was in the very centre of the triangle made by the other three. The final triumph of French over these others was owing to the political ascendency of the House of Capet. From the 13th century onwards its triumph was assured and the other languages became mere *patois* (dialects). The oldest monuments of French are the "Strasburg Oaths" (A.D. 842) between the sons of Charlemagne. French Literature is one of the finest in the world. And its copious stream has as yet shown no sign of diminution. In the extensive French colonies strenge, hybrid forms of French have arisen. There is a Canadian French which is almost entirely pure but in Louisiana and in the West Indies (Haiti, Martinique etc.) and in Mauritius the language has become strangely transformed into various types of "Negro French."

Provencal (or Langue d'oc) was the principal language of the south of France until well into the 13th century. It has produced a lot of fine ballads and Troubadour literature. The earliest work preserved in this language is the Song of Boethius (about the end of the 10th and the beginning of the 11th century). It is still spoken as a dialect in Auvergne, Limousin and Gascony. One of its dialects, Catalan, is found in Spain. Provencal seems to have been a link between Italian and French.

Of all the Romance languages Spanish seem to be the furthest removed from Latin. This is due to a great mixing up of races, languages and cultures in the Iberian peninsula. The original inhabitants of Iberia spoke Basque. When the Roman domination ceased the Visigoths, a Germanic people, ruled over the land. These in their turn were replaced by the Arabs. All these have left a very strong impress upon modern Spanish especially on its phonology and vocabulary. Spanish literature is quite rich and dates from A.D. 1142. In the 16th century Spanish spread far and wide all over the New World and also as far east as the Philippine Islands. The Spanish spoken in the bigger republics of South America today is almost pure 16th century Castilian, and naturally differs considerably from the modern language as spoken in Europe. In the Philippines the native Malay languages have considerably changed the Spanish there. In the West Indies the Negroes of San Domingo and Trinidad have developed a special "Negro Spanish". But the strangest transformation is the Creole dialect found in Cuba and elsewhere. In this the original Spanish has been transformed almost beyond recognition in the mouths of the full-blooded aboriginal West Indians. In European Spanish various dialects such as Andalusian, Aragonian, Castilian and others may be recognised. Of these Castilian has supplanted all others as the standard literary language.

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[1] Dante has called Italian "la lingua di *si*"

In Portuguese we can distinguish two clear dialects—Portuguese and Gallician. The latter is spoken in a province of Spain. The oldest literary work in Portuguese was composed in A.D. 1192. Like Spanish this language had also once a world-wide currency. The most important foreign variant of Portuguese is that spoken in Brazil. There is also a "Negro Portuguese" spoken in the Cape Verde Islands and in Senegambia, and a "Malay Portuguese" used in the East Indian Archipelago. Another remarkable dialect is the "Indo-Portuguese" spoken in

Goa. Its vocabulary superposed on Konkaṇi has given rise to the remarkable Goanese speech.

Among the extinct Romance languages may be mentioned Dalmatian, once spoken in Dalmatia along the coast, and its variant Vegliotic spoken on the Island of Veglia.

§ 209. *The Greek (or Hellenic) branch*

The geographical conditions of Greece, which divided it politically into a number of small states, also led to the formation of a great many dialects. Being descended from a common parent stock they necessarily had an outward semblance of unity, but the dialects of districts near the frontiers of the Hellenic world were so very different that the people of Greece refused to recognise their kinship. Thus even the Macedonian dialects were classed by them as barbarian. Different dialects have always existed in Greek and even in the Homeric epic there are distinct dialects traceable.[1] In its ancient form Greek is a very typical I.-E. language, and, next to Sanskrit perhaps, possesses the most elaborate grammatical structure. The following are the important points to notice when Greek and Sanskrit (Vedic) are compared :

1. Greek has got its vowel-system closer to the I.-E. Ursprache and its exceedingly rich in diphthongal sounds. In Sanskrit the I.-E. consonants are better preserved.

2. Both languages show markedly the pitch or musical accent.

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[1] This Epic was put together at a later age and there are traces of the artificial joining and even a later attempt to produce uniformity of language is quite clear to critical scholars.

3. The noun and pronoun declension of Sanskrit is more elaborate, Greek shows only traces of some of the case forms like the instrumental and the locative.

4. In both the indeclinables (prepositions and adverbs) are very numerous, but these are not always identical.

5. In the verbal system:
   - (*a*) both have the *Parasmaipada* and the *Ātmane-pada*,[1]
   - (*b*) the tense systems and derived conjugations[2] are somewhat richer in Sanskrit, but
   - (c) participles, infinitives, gerunds and verbal nouns are much more elaborate in Greek.

6. The dual number is found in both languages.

7. There is the same facility in building up compound in both languages; but in Greek the compounds have rarely attained the proportions of the Sanskrit compounds of the later classical age.[3]

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[1] In Greek Grammars the *active* and the *middle voice* respectively.

[2] I.e., causal, intensive, desiderative, etc. But in Greek too we get such forms as *katapepolemēssmetha* (we shall have been warred-down).

[3] Classical Greek can show a few long compounds. Such for example is the one which has 78 syllables and 171 Greek letters: *lepado-temakho-selakho-galeo-krânio-leipsano-drim-upotrimmato-silphio-karabo-melito-katakekhumeno-kikhlepikossupho-phatto-perister-alektrum opto-kephallio-kigklo-peleio-lagōio-siraio-baphē-tragano-pterugōn*. This is a compound word in Aristophanes, *Ecclezousai*, 1169 (as emended by Moincke). It is the name of a dish compounded of all kinds of dainties, fish, flesh, fowl and sauces. It means "a pungent dish of pounded limpet, slices of salt fish and bits of sharks' heads, silphion with sea-crayfish, honey poured over it, thrush, blackbird, ringdove, pigeon, roasted cock's head, curlew and dove, hare's flesh dipped in new wine when boiled down, the whole edged with figs." But these are mere curiosities, rather monstrosities, of a language

Greek shows four distinct stages of growth: 1. Homeric (or Ancient), 2. Classical, 3. Transitional and 4. Modern. The main divisions are indicated in Table XXV.

Homeric Greek shows clear traces of dialects. It is mainly Ionic, but there is a strong admixture of Aeolic. The Homeric poems date from B.C. 1000 at least, and these presuppose a considerably prolonged earlier growth of language and popular literature.

Among the dialects of Classical Greek may are known only through inscriptions. It is also to be noted that as the language grows there is a distinct tendency towards standardising one particular dialect—the Attic. The Doric dialects are amongst the earliest of the Hellenic branch. The Dorians destroyed the great pre-Hellenic civilisation of the Aegean and of Crete. The Cretan dialect mentioned in the table was not the language of this pre-Hellenic culture, but was a dialect of the Doric conquerors. Among the Doric dialects Lakonian has a special interest. It was the dialect of Sparta, and its direct descendant, the Zakonian is the modern representative of Doric.

Attic forms the basis of what is called Classical Greek. It became, during the age of Athenian supremacy, the standard literary language of Greece. The chief point of difference between Ionic-Attic and Doric (as also Aeolic) lies in the treatment of the I.-E. *ā sound. The former changed it to ē, while the latter preserved it. Thus, I.-E. **mātēr* gave Attic *mētēr*, but the Doric was *mātēr*. Classical Attic clearly shows two stages of growth: Old Attic of the Histories and the Drama (B.C. 500-400) and New Attic of Plato and Demosthenes (B.C. 400-300).

After the Macedonian conquest Attic became the standard spoken language of the whole Greece. Thenceforth it was known as *hē koinē didlektos* (the conventional,

- Greek Language
  - Homeric
    - Classical Greek
      - Doric
        - Lakonian—Zakonian
        - Corinthian
        - Messanian
        - Megarian
        - Cretan
        - Rhodian
        - Syracusian
      - Dialects of Elis
      - Achaian
      - North-western dialects
        - Phocian (Delphi)
        - Locrian
        - Aetolian
        - Epirus
      - Aeolic
        - Boeotian
        - Thessalonian
        - Lesbian
        - Asiatic Aeolic
      - Arcadian
        - Arcadian
        - Cypriot
      - Pamphylian
      - Ionic-Attic
        - Ionic
          - Asiatic
          - Cycladic
          - Euboean
        - Attic—Koinê—Modern Greek

Table XXV.—Greek (or Hellenic) Languages.

Facing § 209

i.e., the common language), or only *hē koinê*. It is from this Koinê that Modern Greek is derived.

§210. *History of Post-Classical Greek*

After the classical period, which ends with the loss of Athenian independence, the further development of Greek shows many points of interest. The transition to modern Greek shows seven clear stages besides one "transitional" stage. One important feature found throughout its history is the tendency towards *atticising*, i.e., reverting to the classical models of the great Attic writers of the past.[1] Table XXVI shows the development of the Attic dialect *historically*.[2]

This table traces the steps in the development of Modern Greek. Alexandrian Greek had been influenced by Hebrew and Egyptian elements. The Graeco-Roman colloquial speech has been preserved in some papyri. Byzantine Greek is a direct development from the literary dialect of the second transition period. Literary Mediaeval Greek is a development of the *colloquial* of the previous (Neo-Hellenic) period. This is the only occasion in the history of the Greek language when the colloquial dialect of one period became the literary language of the next. Modern Greek has been showing strong atticising tendencies ever since Greece became independent in A.D. 1824. Modern Greek dialects fall into some eight groups. None of them except Zakonian is descended from the dialect spoken in the same district in ancient days.

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[1] Compare the similar tendency to *sanskritising* noted all through the history of Indian Languages.

[2] Adapted from J. M. Edwards, *An Introduction to Comparativ Philology*, pp. 99ff.

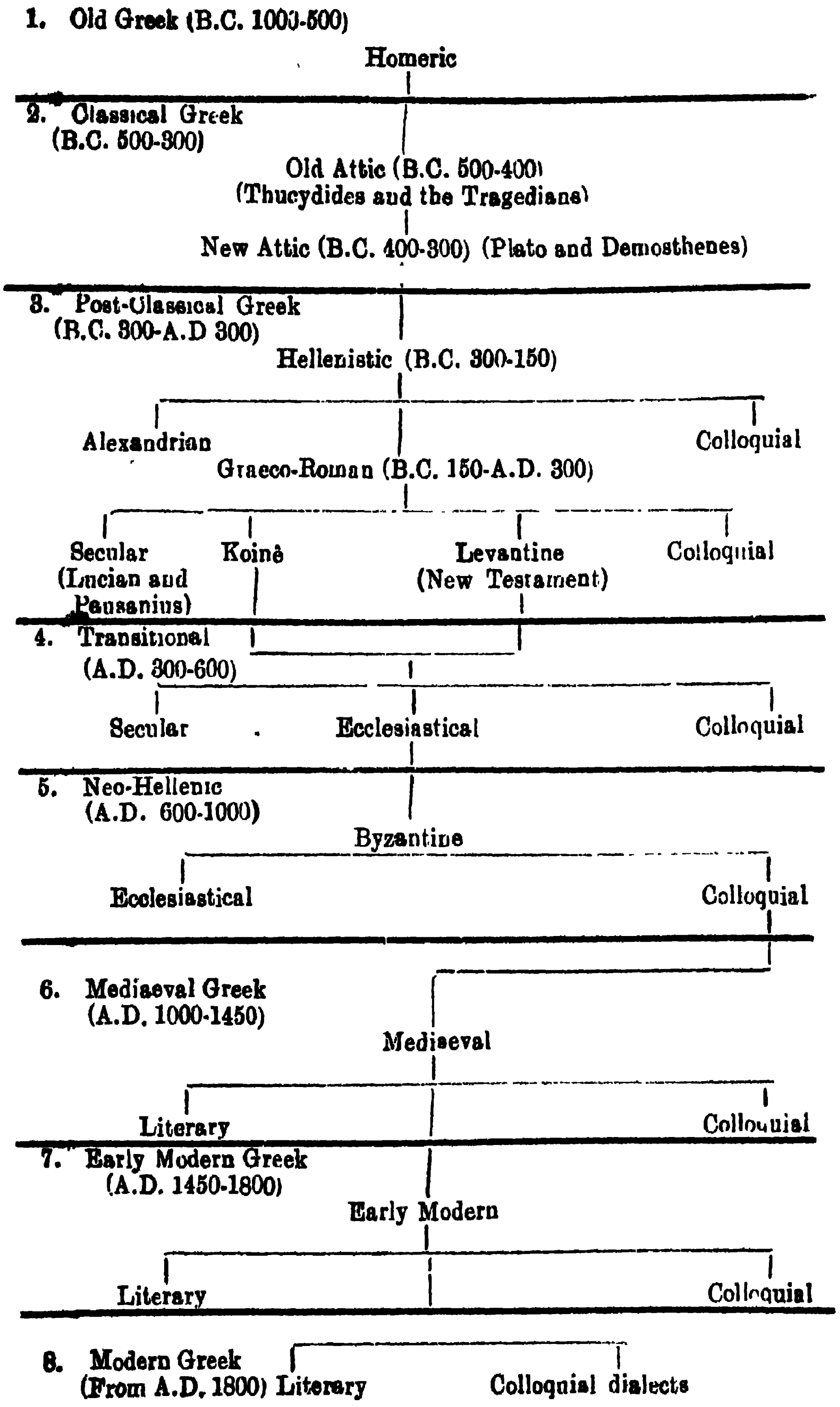
1. Old Greek (B.C. 1000-500)
Homeric
2. Classical Greek (B.C. 500-300)
Old Attic (B.C. 500-400)
(Thucydides and the Tragedians)
New Attic (B.C. 400-300) (Plato and Demosthenes)
3. Post-Classical Greek (B.C. 300-A.D 300)
Hellenistic (B.C. 300-150)
Alexandrian
Colloquial
Graeco-Roman (B.C. 150-A.D. 300)
Secular (Lucian and Pausanius)
Koinê
Levantine (New Testament)
Colloquial
4. Transitional (A.D. 300-600)
Secular
Ecclesiastical
Colloquial
5. Neo-Hellenic (A.D. 600-1000)
Byzantine
Ecclesiastical
Colloquial
6. Mediaeval Greek (A.D. 1000-1450)
Mediaeval
Literary
Colloquial
7. Early Modern Greek (A.D. 1450-1800)
Early Modern
Literary
Colloquial
8. Modern Greek (From A.D. 1800)
Literary
Colloquial dialects

TABLE XXVI—GROWTH OF MODERN GREEK

(Facing § 210)

It will be noted that in this branch we do not have an extensive spreading out of the language as in Latin. Of course, there are many survivals of the old dialects, but we have considered only the standard language at various periods of its history. Modern Greek differs from the Classical Attic in the following important respects:

1. Certain vowels and diphthongs have become uniform in pronunciation and have thus merged together.

2. The consonants, too, have changed considerably in their sounds. Thus the aspirates *kh*, *th*, *ph* have become spirants.[1] So also *d* has become a spirant like *th* in *then*.

3. The vowel-length is ignored.

4. The pitch accent is replaced by a very strong stress.[2] This has led to a considerable phonetic breaking up.

5. Cases have become confused and are replaced mostly by prepositions.

6. In verbal conjugation auxiliaries have largely taken the place of flexions.

7. Many new words have been coined, and loan words have been imported in considerable numbers.[3]

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[1] In ancient Greek they were exactly equal to Skt., ख्, थ्, फ्. In modern Greek they have the value of *ch* in *loch*, *th* in *thing* and th English *f* respectively.

[2] The effect on ears unused to this account is almost painful.

[3] See J. Marle Rife's "The Language Literateur in Greece today" in the *Classical Journal*, 37, 2 (Nov., 1941), pp. 65-72.

§ 211. *The Hittite branch* [1]

Towards the end of the first decade of the present century[2] excavations at Boghaz-küei, ninety miles east of Ankara in Asia Minor, resulted in the discovery of several thousands of inscriptions in Sumerian and Akkadian cuneiform script. On being deciphered they were found to have been the records of the Hittites. Till comparatively recently we knew little of these people beyond their name, which had been long known to us through the Bible and other Hebrew sources. The Tell-el-Amarna letters, discovered in 1888, had thrown valuable light on the second Hittite Empire of the 15th and 14th centuries B.C. And these new inscriptions opened out the full history of the people. The excavations are even now by no means completed and it is very possible that many new documents are still to be discovered. Many of these inscriptions are editions or recensions of still earlier texts of the first Hittite Empire (ca. 1900-1650 B.C.). These show distinctly earlier forms of the language. And a distinct dialect, the Luwian, is also discoverable from the ritual texts.

These Hittite texts constitute perhaps the oldest *writings* belonging to the I.-E. languages. They have been written down in cuneiform script and contain a large number of Sumerian and Akkadian ideograms, which are of course, to be read as Hittite. So at one time a sharp controversy raged as to whether the language was of Semitic origin strongly influenced by I.-E. or whether it was an original I.-E. language under strong Semitic (Akkadian) influences.[1] The latest and the most considered opinion holds that both Hittite and Tokharian are I.-E. languages and that "although in territory of the *śatam*-languages, nevertheless themselves belong to the *centum* group."

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[1] I have utilised for Hittite and Tokharian the articles that have appeared in *Language*, in particular the two which appeared in Vol IX of that periodical (1933)—"Archaism in Hittite" by E. H. Sturtevant and "Hittite and Tocharian" by Walter Petersen. I have also utilised freely E. H. Sturtevant's *A Comparative Grammar of the Hittite Language* (Yale University, 1933). I have quoted freely from all these three.

[2] It was Hugo Winckler who first discovered these Hittite inscriptions and he first described them in the *Mitteilungen der deutscher Orient-Gesellschaft*, 35 (1907).

Hittite presents a type which is very distinct from the other languages of the I.-E. family; indeed, together with the Tokharian, it forms a group entirely distinct and different from the other languages of the family. Hittite "bears somewhat the same relationship to the Indo-European languages that Greek and Sanskrit bear to the Italic languages". In other words the latest opinion favours the view that the Hittite-Tokharian group was the first to separate from the main body of I.-E. languages. And some (like Sturtevant) postulate an earlier stage named "Indo-Hittite" from which are descended the Hittite-Tokharian group on the one hand and the I.-E. Ursprache on the other.[2]

The noteworthy peculiarities of Hittite are the following:

(1) "Hittite nouns, adjectives and pronouns present two genders one corresponding to the I.-E. masculine and feminine and the other to the I.-E. neuter." The striking difference from the I.-E. system is the lack of the feminine gender.[3]

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[1] A very readable paper on the early controversy regarding in position of the Hittite language was contributed by S. J. Crawford to the *JRAS*. (1919) entitled "The Decipherment of the Hittite Language".

[2] See the diagrammatic table given in Sturtevant's book (p. 30 .

[3] There is "merely a distinction between the animate and the inanimate or neuter in the nominative and accusative" (*Language*, ix, p. 5).

(2) Hittite shows six cases out of the I.-E. seven, the locative being absent.

(3) The pronouns show a very close resemblance to I.-E. pronouns, especially to Latin:

Hittite:	Latin:
uk (*uga*), I	*ego*
kwis, *kwid*, which	*quis*, *quid*
kwiskwi, anyone	*quisquam*
kwisa, whoever	*quisque*

(4) The verbal system of Hittite is much more simple than that of the ancient I.-E. languages. There are but two moods (indicative and imperative) and two tenses (present and preterite). There are two secondary conjugations (causal and iterative-durative). There is a compound perfect and its preterite made up of the participle and the auxiliary verb *har*(*k*)-, to have. The root-conjugation is much more frequently found than in other I.-E. languages, where it is progressively eliminated. As an example we may give the forms of the root *ya*-, to make:

Present: singular,	1.	*yami*	Cf. Sanskrit यामि
	2.	*yesi*	यासि
	3.	*yezi*	याति
plural	1.	*yaweni*	
	2.	*yateni*	याथन[1]
	3.	*yenzi*	यान्ति
Preterite: singular,	1.	*yanun*	
	2.	*yet*	
	3.	*yet*	अयात्
plural	1.	*yawen*	
	2.	*yaten*	अयात
	3.	*yer*	अयुः

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[1] Whitney, *Sanskrit Grammar*, § 519 a.

Imperative: singular,	2.	*ya*	या
	3.	*yatu*	यातु
plural	3.	*yentu*	यान्तु

There is also a nasal conjugation (with a nasal infix and with the suffix -*nu*) which reminds us of Sanskrit, but in Hittite both these have a causal value.

§ *212. The Tokharian branch*

This branch was added as a result of the French and German expeditions to Turfan in Central Asia early in the present century. A large number of manuscripts written in an ancient Indian script[1] were recovered and when these were deciphered, chiefly by Professor Sieg, they revealed a new language of the Indo-European family and belonging to the *centum*-group[2].

Tokharish was the language of the people who were known to the Greek as "Tokharoi" as forming part of the Indo-Scythian race. They had founded a kingdom in Central Asia after the fall of the Graeco-Bactrian kings in the 2nd century B.C. The Tokharian dominion lasted till the 7th century A.D. when it was destroyed by the Huns. The Tokharian documents show clearly two dialects (provisionally called the A and B dialects) of which one has been more or less fully studied; but still a great deal of further study is needed before we can arrive at any final conclusions.

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[1] This script is technically known as "the Central Asian Slanting"; see *JASB.* 1901, Pt. 2, extra number 1, pp. 11 ff.

[2] A good early summary of the Tokharian language is found in a paper by Sieg and Siegling entitled *Tocharisch, die Sprache der Indo-Skythen*, published in the *Sitzungsberichte der Berliner Akademie der Wissenschaften*, 1908. Nearly twenty-five years later a *Tokharian Grammar* has been published by Schultze, Sieg and Siegling.

"Tokharian phonetically has decayed far beyond Hittite, as may be expected in a language whose documents are over twenty centuries later." The forms in Tokharian however are more archaic than those in Hittite. Hence "the evidence of Hittite and Tokharian combined" is of great value. The similarity of Tokharian to other I.-E. languages is not apparent at first glance. A great deal of influence has crept in from the surrounding agglutinating Ural and Altaic languages. The main peculiarities of Tokharian are:

(1) The original I.-E. vowels have been simplified and their quantity seems to have been neglected. The original consonants of each class have also been reduced to simple voiceless unaspirates, "so that of all the wealth of I.-E. explosives there is left only the trio of *p*, *t*, *k*."[1] Later borrowings from Sanskrit and other languages have brought back the other explosives in the later stages of the language and so there has also been a secondary development of these sounds.

(2) Tokharian has developed nine cases, of which six are clearly secondary developments by the addition of postpositions at a later period.[2] "The earlier stage of the Tokharian declension reveals a simple system which is strikingly similar to that part of the Hittite declension which is inherited from the Indo-European."[3] In

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[1] In Hittite too there is a mix up of the original explosives, but it is more complicated. There is a good deal of uncertainty about the exact pronunciation of Hittite owing to its peculiar script.

[2] These six cases are instrumental, comitative (सह case), reason (or *ā*-) case, detive, ablative and locative.

[3] In Hittite the singulars of nominative accusative, dative and genitive and the plurals of nominative (and probably accusative) show a resemblance to the corresponding I.-E. forms.

Tokharian only the three fundamental cases—nominative, oblique (accusative) and genitive—in the singular number show a resemblance to I.-E. forms, and in the plural only two cases—nominative and oblique—are original I.-E. The plurals of the other cases are built up on the agglutinating model, the plural suffix being added first and then the case-suffix (postposition) used in the singular. In the plural of the genitive a "partitive" form has also been developed. Tokharian has also preserved the dual which has disappeared from Hittite.

(3) The pronouns are clearly I.-E. in form.

(4) The numerals are also distinctly I.-E.

(5) The verbal system is much more complex than in Hittite. Many more I.-E. forms have survived and participial forms and constructions have been well developed.

§ *213. The Albanian (or Illyrian) branch*

Albanian is the sole remnant of a once extensive branch, the Illyrian. It presents special difficulties for studying as there are no literary monuments expcept a number of inscriptions.[1] The language has been much influenced by Slavic[2] and there is also a considerable proportion ot Turkish and modern Greek admixture. At first it was not recognised as being a separate branch but the structure and phonetics are distinct enough from the other branches. The main divisions are given in Table XXVII.

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[1] A large number of so-called Albanian inscriptions are now proved to have been forgeries, made by ignorant peasants, because they knew that inscribed stones fetched money.

[2] E.g. the suffixed definite article as with Roumanian (see p. 287 above).

- Albanian (Illyrian) Languages
  - Illyrian
    - Venetian
    - Liburnian
  - Epirot
    - Albanian
      - Gheg (Northern)
      - Tosk (Southern)
      - Graeco-Albanian
      - Calabrian
    - Messapian—Iapygian

Table XXVII—Albanian (or Illyrian) Languages.

- Letto-Slavic (Balto-Slavic) Languages
  - Lettic
    - Old Prussian
    - Lithuanian
    - Lettic
  - Slavic
    - South Slavic
      - Church Slavic—Bulgarian
      - Illyrian Slavic
        - Serbo-Croatian
        - Slovenian
    - Russian
      - Russian
        - Great Russian
        - White Russian
      - Ruthenian (Little Russian)
    - West Slavic
      - Czecho-Slovakian
        - Czech (Bohemian)
        - Moravian
        - Slovakian
      - Sorabian (Wendic)
      - Lechish
        - Polish
        - Polabish

Table XXVIII.—Letto-Slavic Languages.

- Armenian Languages
  - Phrygian (?)
  - Old Armenian—Modern Armenian
    - Ararat (Asiatic)
    - Stambul (European)

Table XXIX.—Armenian Languages.

§ 214. *The Letto-Slavic (or Balto-Slavic) branch*

The Lettic (or Baltic) group is represented by three languages, of which one (Old Prussian) is extinct. Of the remaining two, Lithuanian and Lettic, the former is specially important because among the *living* Indo-European languages, it represents the most archaic type. Among other things it preserves the ancient pitch or musical accent, which was used in Vedic Sanskrit and in ancient Greek. The Slavic group is far more extensive[1] and has developed in special directions. The main divisions are as given in Table XXVIII.

Old Prussian is known through a German-Prussian Glossary and a Catechism. This language became extinct in the 17th century. The oldest Lithuanian-Lettic literature dates from the 16th century. The revival of both these nationalities as a result of the First World War and the Bolshevik Revolution in Russia has also brought about a renaissance of both these national languages during the past two decades.

Of the South Slavic group the most important language for the purpose of comparative grammar is Church Slavic (or Old Bulgarian). It possesses the oldest literary remains of the Slavic branch. These consist of translations from the Bible and other theological works dating from the 9th to the 12th centuries A.D. The chief writers are Bishops St. Cyril and Methodius. This form of Slavic makes the nearest approach to the more ancient Indo-European languages like Sanskrit and Greek. Modern Bulgarian on the other hand is furthest removed from the typical Slavic. It is almost completely analytic in structure, and its vocabulary is very mixed, being made up from Turkish, Greek, Roumanian and Albanian elements.

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[1] Until the 9th century the Slav-speaking races occupied most of Germany and Austria and Slavic languages were spoken as far as the Elbe even up to the 14th century.

Serbo-Croatian represents the various dialects of Jugo-Slavia. It forms an important group of Slavic languages and possesses literature going back to the 12th century A.D. Slovenian is another group which goes back even earlier, to the 10th century. It is spoken along the shores of the Adriatic south of Jugo-Slavia.

Great Russian is the standard literary language of Russia. The literature dates from the 11th century but the language became the standard dialect of all Russia only during the 18th century. White Russian is spoken in West Russia. Little Russian (or Ruthenian) is the language of South Russia, and it has spread through Galicia, Bukhovina and even into Hungary.

Czech comprises the dialects of Czecho-Slovakia. Czech (or Bohemian) literature has been mainly developed during the last century, though its earliest monuments date from the 13th century. Moravian and Slovakian are mere dialectic varieties. Sorabian (or Wendic) is gradually becoming extinct. There remain only about a hundred thousand speakers of this language now scattered through Prussia. The Wends were probably the earliest Slav people.

Polish is a well-developed literary language. The earliest literary work in it is dated about A.D. 1290. The unfortunate history of Poland has fired the enthusiasm of her people for their mother-tongue, and through centuries of suppression the Poles have preserved their language intact. They have now come into their own and their language is progressing rapidly and promises to take its place soon among the great literary languages of the world.[1] Polabish, once spread extensively through the valley of the Elbe, is now entirely extinct.

§ 215. *The Armenian branch*

So copious has been the borrowing from Iranian in this branch, that for a long time Armenian was regarded as a language of the Iranian group. But this view has now been definitely abandoned. There are no fewer than about 2,000 pure Iranian words in Armenian and these have been borrowed at all periods of history.[2] The whole history of Armenian has been intimately connected with that of Irān, and until A.D. 428 the throne of Armenia was occupied by a younger branch of the royal house of Irān. "Kings and nobles had Persian names, Persian also were words used in connection with houses and chase; war and army; dress, trade and coinage; calendar, weights and measures; court and political institutions; music, medicine, school, education, literature and the arts. Many of the everyday words were also Persian in origin,... The language of the old religion too was mainly Persian."[3] Several Iranian prefixes and suffixes were also adopted; the main structure however, apart from the Iranian borrowing, is purely Armenian and quite distinct from that of Iranian or any other Indo-European language. Armenian probably represents a link between the Letto-Slavic and the Aryan branches. The language is essentially Indo-European of the *śatam*-type. Armenian has also been very considerably influenced by non-Indo-European languages. The influence of Caucasian languages is well marked in many cases. The Semitic family too has influenced Armenian, first through Syriac, and later through Arabic. The ancient Phrygian was probably a connected idiom.[1] There are two main dialects, each with its own phonetic peculiarities but recognisable as akin in their grammatical structure. The divisions are given in Table XXIX (p. 302).

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[1] Since the beginning of the Second World War in Sept., 1939, many of the Slavic languages are being deliberately suppressed, particularly Czech and Polish. It is to be hoped that this eclipse is only temporary. The extinction of these languages would mean a serious loss to world-culture.

[2] In many cases the same word has been borrowed twice, at an earlier and at a later period.

[3] *Encyclopædia Britannica (Cambridge edition)*, "Armenian language".

The oldest Armenian records are cuneiform inscriptions from Van. Old Armenian literature is mainly Christian and partly historical and extends up to the 11th century of Christ. This old type of language is still being cultivated and used by Armenian priests much as the Brāhmaṇas use Sanskrit in India.

The Stambul dialect of Modern Armenian is spoken in Constantinople and along the Black Sea coast.

§ 216. *The Aryan (Indo-Iranian) branch*

The name Aryan is now definitely confined to that group of languages, the speakers of which in ancient times called themselves *Ārya*. It consists of languages which go back to a hoary antiquity and possess literary records older than those of any other Indo-European tongue. The two main groups into which the Aryan branch is divided are the most closely connected among the Indo-European languages. The history of the separation of the Aryan languages from the parent Indo-European stock is not at all clear, but the Hittite inscriptions and Tokharish, when properly studied, would, it is believed, lead to clearer ideas on the subject.[1] It seems that the two main branches of the Aryans had already separated at the period of the Hittite inscriptions.

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[1] Herodotus mentions a tradition to this effect.

§ 217. *Characteristics of the Aryan languages*

The Aryan languages make a very closely connected group, sharply marked out from the other Indo-European languages. The chief grammatical peculiarities which distinguish this branch from others are:

1. The I.-E. **a*, **e*, and **o* (short or long) all fall together in Aryan as *a* (short or long) (Skt. अ or आ). For example:

Indo-European	Greek	Latin	Sanskrit	Avesta
**ek̑u̯os*	...	*equus*	अश्वः	*aspō*
**nébhos*	*néphos*	*nebula*	नभः	*nabō*
**osth*	*osteón*	*os*	अस्थि	*ast-*
**róthos*	...	*rota*	रथः	*raθō*
**apó*	*apó*	...	अप	*apa*
**yaǵ*	*házomai*	...	यज्	*yaz-*

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[1] Hittite inscriptions mention the early Aryan gods like Varuṇa, Indra and the Nāsatyas.

2. The I.-E. *ə[1] becomes *i* (इ) in Aryan. For example :

Indo-European	Greek	Latin	Sanskrit	Avesta
pətḗ	*patḗr*	*pater*	पिता	*pitā*
bhérətron	*phéretron*	...	भरित्रम्	...

3. The *r* and *l* sound (and with these the corresponding sonants *r̥* and *l̥*) are confused in Aryan.[2] For instance :

Indo-European	Greek	Latin	Sanskrit	Avesta
u̯l̥qu̯os	*lúkos*	*lupus*	वृकः	*vəhrkō*
léighmi	*leichō*	*lingo*	रेह्मि (Vedic)[3]	...
runc	*orússo*	*runcare*	लुञ्चामि[4]	...

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[1] This letter *ə*, called *schwa* by Western philologists, is really a very short "neutral" vowel. The closest sound in Sanskrit would be an अ pronounced in an interval of half a *mātrā*. I therefore propose to call it अर्धमात्रा. This I.-E. sound had varied developments in the other languages of this family. See § 99 above.

[2] रलयोरभेदः ।

[3] Classical लेह्मि.

[4] Examples of Skt. ऌ (or ॡ) going back to I.-E. *r (or r̥) are rare; Lat. *corpus* is cognate with Skt. कॢप्.

4. I.-E. *s becomes *ś* in Aryan after *i*, *u*, liquids, s or *k*; this changes further to ष् in Skt. For instance:

Greek	Latin	Sanskrit	Avesta
histēmi	*sisto*	तिष्ठति	*hištaiti*
...	*gustus*	जोष	*zaoša*
...	*vox*	वक्ष्यति	*vāxš*

5. In the declension of vowel-stems the gen. Plu. ending is -नाम्.

6. The imperative 3rd per sg. ends in-तु.

These six main characteristics and many other grammatical peculiarities are common to Indian and the Iranian languages as is very apparent when passages of Sanskrit (notably Vedic) and Avesta and Old Persian are compared.

§ 218. *Divisions of the Aryan branch*

The two main divisions of the Aryan are Iranian and Indian. The former had developed fairly early an extensive religious literature of which the greater portion was lost at the time when Persepolis was burnt by Alexander the Great, B.C. 331. This loss was partially made good five centuries later under the rule of the Sassanians, but what was then restored was once again destroyed except for a few books (and fragments of a few others), during the persecutions of non-Moslems under Khalifa al-Mutawakkil (A.D. 847-861) and his successors. These remnants are preserved as the *Avesta*[1] or the Sacred Books of the

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[1] The name *Avesta* seems to have meant "Scriptures" and it comes from a root cognate with Skt. शस् with अभि. This name is now applied to the language in preference to the older names *Zend* and *Old Bactrian*.

Zoroastrians. The other remnants of ancient Iranian dialects are found in a splendid set of inscriptions dating from the time of Kurush[1] (B.C. 558-530), the founder of the Achæmenian empire. The most famous of these inscriptions, as well as the most extensive and best preserved, is the great inscription of Darius (B.C. 522-486) on the Behistun Rock. This dialect is known generally as Old Persian. The oldest records of the Indian branch are the Vedas, which represent perhaps the oldest literature of the Indo-European family. Dardic is a branch of the Aryan standing midway between the other two—Iranian and Indian. It has already been described above in § 184. The Indian (Indo-Aryan) branch has been treated fully in §§ 185-199.

§ 219. *The chief characteristics distinguishing the Iranian group*

The Iranian group developed along certain lines different from the Indian, but the resemblances between these two, especially in the earlier stages, are so great, that a mere phonetic change often suffices to *translate* a passage from the one into the other. And not only is such a translation accurate phonetically, but it also reproduces in a large measure the *spirit* of the original. The main points of difference between these groups (as represented mainly by Avesta and Sanskrit) are as follows :

1. The length of vowels does not always correspond accurately. This non-correspondence is quite irregular.[2] The older Gāθā dialect is marked by the fact that all

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[1] Usually spelt *Cyrus*; but I have preferred to spell the name in a way which would indicate more closely the ancient pronunciation.

[2] Except in the accusative sg. of nouns in *i* and *u* where the vowel is invariably long in the Av.; see Jackson, *Avesta Grammar*, § 23.

final vowels are long, whereas in the later stages of the language they are all short (except *ō*). Examples:

Skt.	अथ	G. A. *aθā*,	Y. A. *aθa*.
	पुत्रा (nom. du.)[1]	*puθrā*	*puθra*
	ऋतुम्	*ratūm*	*ratūm*

2. There is a special development in Avesta of sounds represented phonetically by *ə*, *ə̄*[2]. They represent Sanskrit अ and आ, and the long *ə̄* is practically confined to the Gāθās. These are not found in Old Persian. There are also *e*, *ē* and *o*, *ō* which also often stand in place of Sanskrit अ and आ. And these undergo special modifications when combined with *i*, *u*, *y* and *v*[3]. Examples:

हन्ति, Av. *hənti*, O. Pers. *hantiy*.

अयानि, Av. *ayeni*

यस्य, Gāθ. *yehyā*

वसूनाम्, Av. *vohunām*

3. Sanskrit ए is represented in Avesta by *aē*, and if final it is found usually as *e*. In the Gāθā, however, the ए is usually represented by *ōi*. Examples:

Skt.	सेना	Av. *haēnā*
	वेद	*vaēdā*
	यजते	*yazaite*
	गवे	Gāθ. *gavōi* (Y. Av. *gave*)
	वेत्थ	*vōistā*

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[1] A Vedic form: see Whitney, *Sanskrit Grammar*, § 330 b.

[2] The *ə*-sound in Avesta is a sort of neutral vowel corresponding in most cases to Sanskrit अ.

[3] Jackson, op. cit., §§ 27 ff.

4. Sanskrit ओ is found as *ao* in Avesta and as *əu* in the Gāθā. Examples:

Skt. ओजस्	Av. *aojō*
होता	*zaotā*
घोषैः	Gāθ. *gəušāiš*
क्रतोः	*χratəuš*

5. Sanskrit ऐ and औ are *āi* and *āu* in Avesta. Examples:

Skt. दैवैः	Av. *daēvāiš*
गौः	*gāuš*

6. The diphthong *ā̇* (pronounced आओ) represents Sanskrit आस् and sometimes आम्.[1] Examples:

Skt. देवासः[2]	Av. *daēvā̇nghō*
महान्तम्	*mazā̇ṉtəm*

7. There is a tendency in Avesta to introduce redundant (especially prothetic and epenthetic) vowels in the body of a word. Examples:

Skt. रिणक्ति	Av. *^{i}rinaχti*
अश्वेभ्यः	*aspaē^{i}byō*
भरति	*bara^{i}ti*

8. The treatment of the ऋ is peculiar in Avesta. It is generally represented by *ərə*,[3] sometimes as *are*. A very peculiar phonetic equation is ऋत = *aša*.[4]

9. The Old Persian vowel system is much more simple than in Avesta, due partly, doubtless, to the limitations of the cuneiform script adapted from the Semitic Babylonian.

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[1] Ibid, §§ 43-44.

[2] A Vedic form, see Whitney, *Sanskrit Grammar*, § 329 a.

[3] In many cases it has to be pronounced as ऋ.

[4] See my article on "Ṛṣi" in *Sir Asutosh Mookerjee Silver Jubilee Volumes* (*Orientalia* III 2, pp 143-146).

10. The voiceless unaspirates (क्, त्, प्) become affricates (χ, θ, *f*) in Av. when conjoined to other consonants. Sometimes the Av. X, θ, *f* represent the voiceless aspirates ख्, थ्, फ्.[1] Examples :

Skt.	क्रतुः	Av.	*Xratuš*
	सत्यः		*ha*^{i}*θyō*
	स्वप्नम्		X^{v}*afnəm*
	सखा		*haχa*
	गाथा		*gāθā*
	कफम्		*kafəm.*

11. The voiced aspirates (घ्, ध्, भ्) are often represented in Younger Avesta (and *always* in Gāθā) by the corresponding unaspirates (*g*, *d*, *b*). In Younger Avesta we sometimes get the voiced affricates (γ, δ, *w*) also. Examples :

Skt.	जङ्घा	Av.	*zanga*
	धारयत्		*dārayat̰*
	भूमि		*būmi*
	दीर्घः		*darəγō*
	अध्वानम्		*aδwanəm*
	अभ्रम्		*awrəm*

12. The initial स् becomes *h* in Iranian. Examples:

Skt.	सिन्धु	Av.	*hindu*
	सर्व		*ha*^{u}*rva*
	सकृत्		*hakərət̰*

13. The combinations अस् and आस् have a complex development in Avesta when initial or medial, the gutteral nasal ŋ being generally inserted. Examples :

Skt.	वसनम्	Av.	*vaŋhanəm*
	असु		*ahu* or *aŋhu*
	मासम्		*mā̊ŋhəm*
	पाहि		*pāhi*

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[1] True aspirates are unknown in Avesta as in Modern Greek.

14. अस् and आस् final (i.e. अः and आः) become ō and ā̊ in Avesta Examples:

Skt.	असुरः	Av.	*Ahurō*
	इषवः		*isavō*
	गाथाः		*gāθā̊*
	सेनायाः		*haēnayā̊*

15. The voiced sibilants *z* and *ž*[1] are special developments in Iranian. They generally represent Sanskrit ह्. In Old Pers. the *z* often changes to *d*. Examples:

Skt.	हस्तः	Av.	*zastō* (O. Pers. *dast*)
	अहम्		*azəm* (,, ,, *adam*)
	अहिः		*ažiš*
	दहति		*dazaiti*

16. Of the various "classes" of consonants in Sanskrit, the velars, dentals and labials are represented in Avesta fully, but of the palatals Avesta has only *c* and *j*, while the cerebrals are entirely wanting.

17. The nasals are five in number in Avesta as in Sanskrit but only *η* (ङ), *n* (न्) and *m* (म्) correspond.

18. ळ् is entirely absent. The same is the case also in the *earlier* Veda.

19. The accent in Avesta is a strong stress and this accounts for a great many of the peculiarities, such as the dropping and length of vowels and it also affects the metre. The Sanskrit accent is a pitch or musical accent.[2]

20. In declensions the *-ăṯ* termination of ablative singular, which in Sanskrit belongs to अ-nouns only, is extended in Younger Avesta to all nouns. Examples:

Xšaθrāṯ	(from *χšaθra*. क्षत्र)
visaṯ	(from *vis*, विश)
ṯbišyaṉtaṯ	(from *ṯbiṣyaṉt*, द्विषन्त्)

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[1] Pronounced like *z* in *azure*.

[2] See Chapter VIII (§ 134).

21. Periphrastic forms, which in Sanskrit are later developments, are almost entirely unknown in Avesta. And the three or four that are found are not paralleled in Sanskrit.[1]

§ 220. *The close similarity between Iranian and Indian languages*

(*a*) *Avesta* and *Sanskrit*

In order to illustrate the extreme closeness between these two groups composing the Aryan branch it would be best to take an Avesta passage and translate it word for word into Sanskrit. I therefore give here the first verse of Yasna IX[2] which is in a metre corresponding to the अनुष्टुप् (i.e. eight syllables to the *pāda*) and it will be seen that the metre also comes right if we make due allowances for the differences of accentuation.

Avesta text :—

hāvanīm ā ratūm ā
Haomō upāit̰ Zaraθuštrəm,
Ātrəm pairi-yaozdaθəntəm,
Gāθā̊s-ca srāvayntəm.
ā-dim pərəsat̰ (Zaraθuštrō)[3]*: kō - narə, ahi ?*
yim azem vīspahe aŋhə̄uš
astvatō sraēštem dādarəsa.

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[1] Jackson, op. cit., §§ 623 and 722-724.

[2] See "A Sanskrit Version of Yasna IX" in *Sir Asutosh Mookerjee Silver Jubilee Volumes* III (*Orientalia*, Part 2), pp. 37-90.

[3] The brackets imply that the word is a later addition which does not quite fit in with the metre.

Sanskrit version :[1]

सवनिम् आ ऋतुम् आ
सोम उपैत् जरथुष्ट्रम् ।
अत्रिम्[2] *परि-योष्-दधन्तम्
गाथाश्च [अपि][3] श्रावयन्तम् ॥
आ तम् पृच्छत् (जरथुष्ट्रः) को नर् असि
यम् अहम् विश्वस्य असोः ।
अस्थिवतः श्रेष्ठम् ददर्श ॥

Translation :

At the hour of early morning Haoma came up to Zaraθuštra who was cleaning all round the fire (-altar), and was chanting the Gāθās. Unto him asked Zaraθuštra, "Who, O Hero, art thou, whom I see the noblest of all material creation".

(b) *Old Persian and Sanskrit*

A similar instance may be given from Old Persian. But here some words are strange to Sanskrit. I have indicated these by enclosing them in brackets. This passage is from the Inscription of Darius at Naksh-i Rustam.

Old Persian text :

Baga vazarka Auramazda, hya imām būmim adā, hya avam asmānam adā, hya martiyam adā, hya siyātim adā

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[1] For full explanation of the special words and forms see the article mentioned in ftn. 2, p. 316. The words preceded by an asterisk (*) are "coined" or are used in a special sense.

[2] It will be noted that except the "coined" forms all the words are found in the Veda in the sense used here, and even for these "coined" words there are Vedic forms which are fairly close cognates Thus, अत्रि is a name for fire in *ṚV.*, II. 8. 5, as explained by Sāyaṇa.

[3] Metre requires an अपि to be added here for पादपूर्त्ति.

martiyahyā, hya Dārayavaum χšāyaθiyam akunauš, aivam paruvanām χšāyaθiyam, aivam paruvanām framātaram.

adam Dārayavauš χšāyaθiya vazarka, χšāyaθiya Xšāyaθiyānām, χšāyθiya dahyūnām vispazanānām, χšāyaθiya ahyāyā būmiyā vazarkāyā dūrai apiy; Vištāspahyā puθra, Haχāmanišiya, Pārsa Pārsahyā puθra, Ariya Ariya-ciθra,

Sanskrit version:

भग: बुजुर्ग:[1] अहुरमज्द:, य: इमाम् भूमिम् अधात्,[2] य: अवम्[3] अस्मानम्[4] अधात्, य: मर्त्यम् अधात्, य: शादिम्[5] अधात् मर्त्यस्य, य: धारयद्वसुम् क्षयन्तम्[6] अकृणोत्, एकम् पुरूणाम् प्रमातरम्[7].

अहम् धारयद्वसु: क्षयान् बुजुर्ग:, क्षयान् क्षयताम्, क्षयान् दस्यूनाम्[8] विश्वजनानाम्, क्षयान् अस्या: भूम्या: दूरे अपि, इष्टाश्वस्य[9] पुत्र:, हखामनिशीय:, पार्स: पार्सस्य पुत्र:, आर्य: आर्यचित्र:[10] ।

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[1] The word *vazarka* has given the Modern Irānī *buzurg* (great). I have merely transcribed the Iranian word here (as also the name *Ahurmazda*) as there is no Sanskrit word corresponding. The word has come into our vernaculars through Irānī.

[2] The final त् drops out in the cuneiform script as there is no pure consonant in that script.

[3] The pronominal stem *ava* is found in the *RV.* in the gen. loc. du. अवो:.

[4] Cf. *āsmān* (sky) in our vernaculars.

[5] Here again I have put in the Mod. Irānī word *śādī* (rejoicing). In the vernaculars it is used for the special occasion of "marriage".

[6] From क्षि (to rule). This root is found in the name परिक्षित.

[7] प्रमति (fem.) is found in the sense of "protection" in the Veda.

[8] दस्यु here means 'country". In the Veda the word is used people.

[9] इष्टाश्व, found in *RV.* i. 122. 13, seems the nearest Sanskrit equivalet to this name.

[10] चित्र is used in the Iranian sense of "lineage" or "progeny".

Translation:

A great God (is) Ahura Mazda, who created this earth, who created yonder heaven, who created man, who created happiness for man, who made Darius king, one king of many, one lord of many.

I (am) Darius the great king, king of kings, king of the countries of all sorts of peoples, king of this great earth far and wide, son of Vištāspa the Achaemenid, a Persian, son of a Persian, an Aryan of Aryan lineage.

§ 221. *Iranian Languages, Old Iranian*

The various Iranian languages are shown in Table XXX. It is unfortunate that the full connection between Old, Middle and Modern Iranian have not been clearly made out, except in the case of Modern Irānī (Fārsī or Persian). Among the Old Iranian languages we have a considerable knowledge of Old Persian and Avesta. But as regards the others we know very little beyond their names. Of the Median we possess a few words preserved by Greek writers, one of which is *spaka* (dog). The Sarmatian is believed to have been the ancestor of Ossetic. Of the old Iranian dialects Old Persian and Median were certainly West Iranian; Avesta, and probably also Sarmatian, were East Iranian.

§ 222. *Old Persian and Avesta*

Old Persian has been known through a series of Cuneiform Inscriptions of the Achaemenian period (B.C. 550-331) which are of great interest and historical importance. Quite recently a very large number of fresh cuneiform tablets have been recovered from Persepolis, Susa and other sites. The deciphering of this script by various

Old Iranian	Middle Iranian		Modern Iranian	
Old Persian	Pahlavi	Huzvāresh Pāzand (Pārsī)	Irānī (Fārsī or Persian	
			Kurdish	
Median	?		Ormurī (Bargistā)	
			Caspian dialects	Māzandrānī Samnānī Gīlākī Tālī
			Central dialects	Gabrī (Darī) Kāshānī Niyānī Sivendī
	Turfan	Dialect 1 Dialect 2		
Old Scythian	Saka (Khotanī)?			**West Iranian**
				East Iranian
Sarmatian	?		Ossetic	
			Ghalchāh (Pamir dialects)	Wakhī Ishkāshmī Shighnī (Kughnī) Roshanī Sariqolī Munjānī Yidghāh
	Soghdian			Yaghnobī
Gāθā-Y. Avesta	?		Afghān	Pashto (South-west) Pakhto (North-east)
			Balōchī	Makrānī (West) Eastern Balōchī

TABLE XXX.—IRANIAN LANGUAGES (Facing § 221)

scholars, particularly by Rawlinson, has been one of the romances of scholarship.[1]

Avesta (once called Zend or Old Bactrian) was the language of the court of Vištāspa, King of Bactria, before whom the Prophet Zarathushtra preached his new faith. The sacred texts of Zoroastrianism are said to have been collected together in 21 separate volumes, arranged according to topics, and known as the *Nasks*. These are said to have been collected in the reign of Darius I (the Great) and transcribed on parchment and preserved in the royal archives at Persepolis. These were completely destroyed at the burning of Persepolis by Alexander the Great. There might have been other copies but all traces of them have been lost. Most of these texts, however, seem to have been preserved in the memory of the priests during the five centuries succeeding the Macedonian conquest. On the restoration of the Zoroastrianism as the state religion, beginning with the reign of Valkhash (Vologeses I, A.D. 51-77), these 21 *Nasks* were once again put together and committed to writing. The work was continued into the Sasanian period, and under the patronage of the first two rulers, Ardashīr I (A.D. 226-240) and Shāpūr I (A.D. 240-271) it was finally completed. After the Arab conquest (A.D. 651) the religion of Zoroaster went into decline. But the sacred texts were still available up to the reign of the Abbasid Khalifa al-Ma'mūn (A.D. 813-833). The fierce persecution of all non-Moslems instituted by the bigots who succeeded al-Ma'mūn led to the destruction of a large number of these texts and the work of destruction was completed by the terrible Mongol invasion of Iran (A.D. 1258). What we possess now consists of a few fragments.

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[1] A fine account of this is given in David Master's *The Romance of Excavation* (Chap. IX).

These have been edited by Spiegel, Westergaard and Geldner in Europe and by K. E. Kanga, T. D. Anklesaria and other Parsi scholars in India. These include texts of all ages, from the earliest—the *Gāθās*, (attributed to Zarathushtra himself and which may be regarded as contemporary with the Vedas)—to the *Vendīdād*, which was put into its present shape in the Sasanian days. A good deal of the *Vendīdād* was probably actually composed at the same period during the first three centuries or so of the Christian era.

§ 223. *Middle Iranian Languages*

Of the Middle Iranian languages we possess more knowledge and during the past thirty years this has been considerably increased by the labours of devoted scholars like Andreas, Meillet, Gauthiot, F. Müller, Bailey and others. The most important of these languages was Pahlavī, the spoken and literary language of Sasanian Iran. Pahlavī shows a very considerable admixture of Semitic in its words as well as in its syntax. The very peculiar script of Pahlavī (borrowed from Aramaic) adds very greatly to the difficulty of reading what is called "book Pahlavī". There are only some thirteen signs to represent about twenty-seven distinct sounds, without the distinguishing "points" being used as in modern Persian script. Inscriptional Pahlavī, however, has a fairly clear and readable alphabet. The proportion of pure Semitic words in the language is so great that at one time a controversy raged between scholars as to whether Pahlavī was Aryan or Semitic. That question has now been settled beyond all doubt. Pahlavī is a descendant of Old Persian. A strong Aryanising movement was started even in the Sasanian period which sought to replace all Semitic words in Pahlavī by pure Aryan. At an earlier stage the Semitic words were written down unchanged but were *read* as Aryan[1]. This type of Pahlavī is called *Huzvāresh*, though this term is now no longer used. But later on a new script was developed where one sign stood for one sound. Pahlavī was now written in this new script and the vocabulary now used was almost entirely Aryan. This variety of Pahlavī is called *Pāzand* or *Pārsi*.

Among other Middle Iranian dialects those of the Turfan fragments are noteworthy. Those are important also on account of their contents which deal with the eclectic religion of Mani. Even of greater importance has been the script in which these Turfan fragments had been written down. A study of these led to the important researches of Andreas and Wackernagel about the original form of the Arsacid version of the Avesta texts.

The Soghdian had been worked out by Robert Gauthiot before his lamented death in the First World War. His work has been now continued by other scholars in France. It seems very probable that some of the present day Pamir dialects have been derived from it.

The Saka (or Khotan) Middle Iranian has been known for well over forty years through some Buddhist manuscripts. These have been published and the details of the language have been worked out. It was probably a development of the Old Scythic language.

§ 224. *Modern Iranian Languages*

Among Modern Iranian languages Persian (*Fārsī*), or (to use its latest name) *Irāni*, is the most important. Among the Indo-European languages it is the most completely analytic in structure. It possesses a magnificent literature extending over more than ten centuries. Quite recently there has been a renaissance of the Iranian nation under the vigorous and able guidance of the patriotic Rezâ Shāh Pahlavī. This is also reflected in the language. Classical Persian vocabulary has a very large admixture of Arabic words, in some of the classical writers the percentage of these is nearly seventy. But today there is a distinct tendency among Irānī writers to aryanise the language[1]. Many words in the modern language also borrowed from European languages, particularly French[2]. The Arabic alphabet, it seems, might also disappear in time and the Roman script may take its place, specially since this change has been carried out with complete success in Turkish, in which language also there was a very high percentage of Arabic loan words. Irān at present stands at the beginning of another "golden age", which promises to be even more brilliant than that of the "good Haroun al-Rashid".

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[1] Just as in English we *write* Latin contractions, *i.e.*, *viz.*, *lb.* and *read* them as English words—"that is", "namely" and "pound".

In Kurdistan also there are distinct signs of a national renaissance. A new and vigorous Kurdish literature, thoroughly impregnated with the spirit of the 20th century, is springing up. The language is also being scientifically studied now by the Kurds themselves.

Ormuri (or Bargistā) is a West Iranian dialect wedged in between the Pashto and Pakhto dialects of the Afghān[3]. It has close affinities with Kurdish, and Grierson thinks that it is probably descended from the ancient Median.

Among the Caspian dialects Mazandrānī possesses some literature. The other dialects are spoken along the southern shores of the Caspian. Tālī extends right into Āzarbaijān.

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[1] Official lists used to be published from time to time giving "pure Iranian" words for the Arabic ones.

[2] A good few are also from Russian.

[3] See above § 182.

Gabrī (or Darī) is the special dialect used by the Zoroastrians (the *Gabrs*)[1] of Yezd and Kirmān. It is indeed the language of the people of that district. Some literature is found in this dialect, notably the "Quatrains" of Bābā Tāher. This dialect as used by the Zoroastrians is distinctly an argot. Many ordinary Persian words have been changed in pronunciation to an extent as to be unrecognisable by those who know only literary Persian. There are also a great many Avesta and Pahlavī words and phrases found in this dialect of the Zoroastrians, and thus they would be unintelligible to the average Moslem.

Of the Pamir dialects only Wakhī and Yidghāh, spoken in the extreme north-west of Chitral, in the region of the Hindukush, are to be counted as falling within the Indian Empire. These dialects are scattered among the high valleys of the Pamir plateau. They are probably modern remnants of the Middle Iranian Soghdian, Yaghnobī especially shows clear affinities.

Afghān possesses some literature of bardic poetry and ballads. Only recently signs of a revival are showing among that nation, and we will probably have a new Afghān literature springing up in the near future.

Balōchī is "the most primitive of the New-Iranian dialects".[2] This applies both to the grammar as also to literature. The latter consists of a few narratives of wars describing heroic episodes and some ballads. The two branches of Balōchī are separated by the "linguistic island" of the Dravidian Brāhuī.

Ossetic is an East Iranian language, but is now found in the Caucasus region. It is surrounded by the Caucasian languages and seems to have been influenced by them to some extent. Some scholars think it is derived from the Sarmatian.

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[1] In Pahlavi the word *gabr* means "man". Arabs used this word to mean Zoroastrians.

[2] Gray, *Indo-Iranian Phonology*, p. xii

§ 225. *Other Indo-European languages of ancient days*

There are several other ancient languages of which we have very scanty knowledge, but for various reasons they are now considered as belonging to the Indo-European family. Of these Old Scythian and Sarmatian have been now definitely put down as Iranian,[1] though our knowledge of both is very scanty.

Phrygian and Thracian are most likely Greek in their affinities and were spoken in the regions implied in the names. Phrygian, however, is a *śatam*-Language. Macedonian has been preserved in Hesichius and belonged probably also to the Greek branch of Indo-European languages. But it seems to have been very largely mixed up with the non-Indo-European languages, which would also explain why the Macedonians were regarded as *barbaroi* by the Greeks.

Messapian, spoken in Apulia and Calabria, and Old Illyrian were very probably Albanian in their affinities. Venetic spoken in North Italy was also probably Albanian.

Ligurian (or Lepontic) has been found in inscriptions dating from the centuries just preceding the Christian era. It was used in the region between lakes Como and Maggiore. Kieckers thinks that it is Indo-European (probably Italic) with a strong infusion of non-Indo-European elements.[2] Dalmatian and Vegliotic (in the small island of Veglia) are also extinct languages of the Italic branch known through some inscriptions.

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[1] See Table XXX.

[2] *Die Sprachstämme der Erde*, p. 16.

CHAPTER XIII

THE VARIOUS LANGUAGE FAMILIES OF THE WORLD[1]

§ 226. *Influence of geographical position and environment upon language development*[2]

We have looked at the various types of language according to their syntactical relations and now we might examine the various families of languages in some detail. Here we may use the "genealogical" classification for each family, but we must be cautious not to apply genealogical relationships too literally to languages. It is necessary also in connection with these "genealogical" relationships to remember also the geographical relationships of the various types. The geographical position of a language has very often had a great deal of positive influence upon its development. The influence of surrounding languages, for example, on the Polynesian group and on the Hamitic languages has been so deep as to have definitely altered their syntactical type. So also have the Aryan languages of India been profoundly influenced by the Dravidian family. It is an exceedingly interesting problem to work out in detail, but work along these lines has only just begun. Then again, the social and cultural status of the speakers of a language and of the neighbouring tribes,[1] and other factors, like climate, food etc. have profoundly influenced languages. In this place the importance of these factors is again merely mentioned: its bearing upon the language has been already considered in some detail in Chapter IV.

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[1] I have drawn upon Tucker, *Introduction to the Natural History of Language* (Chaps. VII-IX) and upon Kieckers, *Die Sprachstämme der Erde* for this chapter. I have also consulted Meillet and Cohen's *Les Langues du Monde.*

[2] See also Chap. IV above.

§ 227. *The four linguistic "regions" of the World*

In order to have a clear idea of the geographical distribution of languages it would be best to divide them into various "regions". These regions are (1) the two Americas, (2) the Pacific Ocean, (3) Africa and (4) Eurasia. Each of these contains several families, which may or may not have been originally connected. But it is certain that within each region the languages have influenced each other to a very considerable extent.

§ 228. *(1) The American Region. Characteristics*

The two Americas are entirely distinct from the rest of the world as regards languages. Though there is a great variety among them and several distinct families can be clearly made out, still they all show one common characteristic. They all are of the incorporating variety. The sentence is often one word of formidable size because the subject, object and other verbal adjuncts (such as adverbs of time, manner etc.) are all incorporated into one long word. And the incorporating is not a mere joining of words as in the compounds of Sanskrit or Greek but the most significant sounds or syllables of each simple word are taken to make the "sentence-word", so that the whole "will awaken in the mind at once all the ideas singly expressed by the words from which they are taken".[1] Thus in Cherokee we get the much quoted example, *nadholinin* (bring us the canoe) from *nalen* (bring) *amokhol* (canoe) and *nin* (to us). Of course we need not think that the whole of a complex sentence can always be thus contained in a word, though there are some "words" which convey a fairly complex idea, for instance, one of eleven syllables which means "he fell down on his knees and besought him". Incorporation, however, is found in all stages of development among the American languages. In some languages we get even independent words capable of being used as such. Thus in Mexican we get besides the incorporated "word" *nišotšitēmoa* (I seek flowers), the single word *šotši* (flower) which with the suffix *-tl* is capable of independent use. And we may use the anticipatory pronominal element *k* and say *ni-k-tēmoa in šotšitl* (lit. I seek it, the flower), thus combining both types of construction.

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[1] Thus Pater W. Schmidt in his book *Die Gliederung der australischen Sprachen* tries to connect the social institutions of Australian tribes with the peculiarities of their dialects. He has done the same with South American languages, see his article entitled "Kulturkeise u. Kulturschichten in Südamerika" in *Zeitschrift für Ethnologie*, 1918.

§ 229. *Classification of American languages*

These languages have not yet been quite satisfactorily grouped together. But some of the important dialects may be here mentioned in tabular form as in Table XXXI.[2]

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[1] Tucker, op. cit., p. 153. But it must be noted that "single words" as we understand the term in our inflecting languages are very often non-existent in the incorporating varieties of speech.

[2] It may be noted that the classification here is mainly geographical because that is fairly convenient. Naturally it cannot be even mutually exclusive. Thus some of the dialects in the United States (like the Apache of Arizona) belong distinctly to the Canadian group. Then again they shade off into each other because the modern political boundaries are not necessarily the original linguistic ones

- I. Canada and United States groups
  - Algonkin
  - Hoka
  - Irokwa (Iroquois)
  - Ne-Dene
    - Athapaskan
    - Haida
    - Tlingit
  - Sioux (or Dakota)
- II. Mexico and Central America groups
  - Uto-Aztec
    - Shoshon
    - Sonora
    - Aztec
      - Nahuatl
      - Nahuat
  - Maya
- III. South America groups
  - Arawak
  - Chibocha
  - Tupi-Guarni
  - Ge (or *Ze*)
  - Araukan
  - Guaykuru (or Waikuru)
  - Carib
  - Quichua (Kitshua or Runa-Simi)
  - Tson
    - Patagonian
    - Fuegian

TABLE XXXI.—THE LANGUAGES OF AMERICA.

(Facing § 229)

It can be seen from this Table that the main divisions are purely geographical. Except in being essentially holophrastic these languages are not necessarily connected with one another. Of course they have been considerably mixed up owing to migrations and to conquests of one tribe by another.

Of the languages of Canada and the United States the Algonkin has been the earliest known to Europeans; hence it has been the best studied. In Canada it extends up to the Rockies and in the United States it is found all along the Atlantic sea-board right up to North Carolina. The Hoka dialects are spoken widely along the Pacific coast of the United States, and in California. The Irokwa dialects come in like a wedge right into the Algonkin and occupy the states of Ontario, New York, Pennsylvania and North Carolina.

The Athapaskan is the widest spread group among the languages of North America. It extends all over Canada from the Pacific to Hudson Bay and southwards it extends through the western states of the U.S.A. up to New Mexico. Two smaller allied groups, the Haida and the Tlingit, extend into British Columbia and Alaska. These three make up the Ne-Dene family of languages.

Just as the Algonkin dominates the great pine forests, so the Sioux (or Dakota) languages dominate the prairies between the Mississipi and the Rockies.

Among the languages of Canada and the U.S.A. Kieckers enumerates twenty-two distinct families, not including the Eskimo.

Mexico and Central America make up a second distinct linguistic region of America. It overlaps the Canada-U.S.A. region to the north-west. Here Kieckers mentions seventeen families of which the Uto-Aztec and the Maya are most important. Of the former the Shoshon group occupied the south-west of the U.S.A. and Sonora is found in South Arizona and North Mexico. The most important language of this group is the ancient Aztec language of Mexico. The ancient Mexican Empire of the Aztecs ended with Montezuma in the 16th century. There were two distinct people, the Aztecs who used the Nahuatl (the-*tl* language), and the Toltecs who used the Nahuat (the-*t* language). There are many records found in this written in strange hieroglyphs which have been only partially deciphered.

Maya is the other literary language of Central America.[1] Maya culture is a very ancient one and some extremely interesting relics have been found in Yucatan written in this language,[2] and Maya dialects are still spoken in that part of America.

In South America and among the West India and the Antilles Islands Kieckers mentions no less than forty-five clearly marked language "families". Many of them overlap into Central America. The more important of these have been enumerated in the Table.

Arawak is perhaps the most important language family in South America. It ranges from Florida in the north up to Paraguay and from the Peruvian shores of the Pacific up to the mouths of the Amazon on the east. At one time these languages were spoken over all the Antilles Islands. In pre-Spanish days these islands were conquered by the Caribs, who massacred all the men and made the women and children slaves. This gave rise to an extremely strange linguistic position. All the women and children of tender age talked Arawak, whereas all the men and the grown up boys talked Carib. This tradition of separate languages for the sexes (a sort of linguistic symbiosis [1]) continued for many generations. Indeed this still continues amongst the Caribs of Dominique, and traces of this are to be found in the language of the Caribs Honduras.[2]

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[1] Central America is the only part of the new world where writing, properly so called is to be found.

[2] Notably the famous "Calendar Stone".

ocha extends through the highlands of Columbia to the north into Costa Rica and Nicaragua. Dialects of it are found in the region of the upper tributaries of the Orinoco and the Amazon. Three distinct groups can be clearly marked out.

The Tupi-Guarni is also a family of wide extent, spreading through Guiana and Central Brazil right up to the river La Plata. The centre of dispersion of these languages is the region between the Parana and the Paraguay. They form a sort of ring round Brazil and extend into Ecuador.[3]

The Ge (or Ze) languages are spoken in the highlands of East Brazil, the Araukan in the strip of North Chile between the Pacific and the Andes, and the Guaykuru (or Waikuru) in Paraguay.

Carib is spoken by a race of savage cannibals, who spreading from the region of the upper Xingu reached the northern shores of South America and conquered the West India Islands. When Columbus reached these islands in 1492 the Caribs were already in full possession.

The Quichua (Kitshua or Runa-Simi) is the only language of South America which was at one time the language of a great and civilised people—the Incas of Peru. With the spread of the Inca Empire it once dominated the greater part of the continent. It was the official medium of intercommunication between the different peoples, and when the Spaniards came it was the common language over a region covering modern Ecuador, Peru, Chile, Bolivia and the highlands of Argentina. The Spanish missionaries took up this language for their religious propaganda and with the spread of Christianity this ancient language of the Incas spread even farther and supplanted other languages in regions it had never reached before.

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[1] Symbiosis is an intimate association between dissimilar organisms for their mutual benefit.

[2] Meillet and Cohen, *Les Languages du Monde*, p. 665.

[3] See map in Helmholt's *World History*, Vol. 1, p. 190.

The Fuegians are among the most primitive people upon earth and their speech also is of an exceedingly primitive type.[1]

§ 230. (2) *The Pacific Ocean Region: Chief Families*

The large and small islands in the Pacific show a bewildering variety of languages and dialects. Only a few of these are literary and one at any rate, the Malayan, possesses literature of an advanced type. All these languages are predominatingly of the agglutinating type, but some have gone far along the lines of analytic structure. Five distinct families may be distinguished among them. These are: (i) the *Indonesia* or *Malayan*, (ii) the *Oceanean*, (iii) the *Papuan*, (iv) the *Australian* and (v) *Tasmanian*. The first two are closely connected and are often included in under one name as *Austronesian* (or *Malay-Polynesian*). These together with the Austro-Asiatic languages make up the so-called *Austric Family* of Languages.[2] Tasmanian is now entirely extinct. All these are shown in Table XXXII.

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[1] See § 30 above (pp. 43-45).

[2] See above §§ 167-169 and Table VIII (pp. 210-213).

- **Austric Family**[1]
  - **Austro-Asiatic (Continental)**
  - **Austronesian (Malay-Polynesian)**
    - (i) Indonesian (or Malayan)
    - (ii) Oceanean
      - Melanesian
      - Transition group (to Polynesian)
      - Polynesian
      - Mixed group (with Papuan and Australian)
- **Pacific Ocean Languages**
  - (i) Indonesian (or Malayan)
  - (ii) Oceanean
  - (iii) Papuan
  - (iv) Australian
  - (v) Tasmanian

Table XXXII.—Languages of Pacific Ocean Region.

(Facing § 230)

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[1] See also Table VIII.

§ 231. *Austronesian Languages*

Table XXXIII gives the names of the more important of these languages. The most striking feature of the languages of the Indonesian group is their extremely wide extension. The islands lying eastwards of Sumatra lie within fairly easy reach of the boats of these islanders; but it is far more difficult to explain why the languages of Madagascar should bear affinities to those of Sumatra 3,000 miles away rather than to those of East Africa barely 300 miles away. This becomes all the more remarkable when we consider that there is scarcely any island available between Sumatra and Madagascar.

In the western half of Formosa the spoken language is Chinese. Formosan is spoken on the Eastern coast as also in the central mountain regions. Tagala is the most important dialect of Luzon, and indeed throughout all the Philippines.

Mālay is the most important language of the Pacific Ocean region. It possesses a fair amount of literature going back to A.D. 1300. It is a prefix-suffix-agglutinating language. It has borrowed considerably from Arabic since the acceptance of Islam by the Malays. At one time Malay seamen penetrated far and wide all over the Eastern Archipelago, and even to-day Malay is spoken in Sumatra and along the coasts of Borneo. Salon is the dialect of the Mergui islands off the west coast of Tenasserim.

Javanese (or Kawi) is the language of nearly three-quarters of the inhabitants of Java. It possesses a very decent literature. Javanese people and their literature have been deeply influenced by Hindu culture, particularly by the *Rāmāyaṇa*. Dyak is the language of Borneo and Sundean is the dialect used by about one-fourth of the people of Java.

- Austronesian (or Malay-Polynesian) Languages
  - Indonesian (or Malayan)
    - Malagasi branch (Western)
      - Mafali (Western Madagascar)
      - Hova (Central Madagascar)
      - East Madagascar
    - Tagala Branch (Northern)
      - Formosa
      - Philippine dialects—Tagala
      - Palan
      - Sangir
      - Bautik
    - Malay-Java branch (Southern)
      - Malay group
        - Malay
        - Salon
        - Sumatra dialects
          - Achin
          - Batak
          - Bali
      - Java group
        - Javanese (or Kawi)
        - Dayak
        - Sundean
    - East-Indonesian dialects
  - Oceanean
    - Melanesian
    - Transition dialects to Polynesian
      - Fijian
      - Micronesian
    - Polynesian
      - Western
        - Vaitupu
        - Samoan
        - Tongan
      - Eastern
        - Maori
        - Raratongan
        - Tahitian
        - Hawaiian
    - Mixed with Papuan and Australian

TABLE XXXIII.—AUSTRONESIAN (OR MALAY-POLYNESIAN) LANGUAGES.

(Facing § 231)

Among the eastern Indonesian languages are the dialects of Celebes and other islands east of Java. They form a distinct linguistic group.

The Oceanean languages are divided into two main groups the Melanesian and the Polynesian with a third, a transition group, between the two. There is also a fourth group of languages which have got mixed up with the Papuan and Australian languages. The Melanesian group extends over the small islands curving southwards and eastwards between Papua and New Zealand. The transition group is quite interesting as showing the characteristics of both. In this group the southern Fiji dialects are the most interesting. The northern dialects are spread over Micronesia, the numerous small islands east of Papua. Fijian comes nearest to Malay. Polynesian also falls into two groups. These languages are interesting as belonging to people who possess a certain amount of culture and civilisation. They seem to have been under considerable mutual influences, and a closer study of these would reveal the lines of migration of the various island peoples all over the Pacific.

§ 232. *Mutual relations between the Austronesian (the so-called "Malay-Polynesian") languages*

The mutual relations of these groups forming the so-called *Malay-Polynesian* family of languages are very interesting. Three groups may be clearly distinguished among these: Indonesian (or Malayan), Melanesian and Polynesian. These three, fairly well defined geographically as well, "are so distinguished in structure as to represent three steps in morphological development".[1] The Malayan branch is a prefix-suffix-agglutinating type. The preposition for instance is *prefixed* to the noun to form cases. But a remarkable development is the infix. The "root" is generally dissyllabic and it is often split to take one or more infixes.[1] Thus in Tagala **sulat** (writing)[2] gives s-*un*-**ulat**, (to write) **s**-*u*-*ng*-*m*-**ulat** (wrote), and **s**-*in*-**ulat**-*an* (was written). The Melanesian family has a few prefixes[3] and a number of "demonstrative" (or pronominal) suffixes agglutinated with the verbs; but the other syntactical relations are largely expressed by loose words and particles as in English. In other words the Melanesian seems to have advanced somewhat towards the analytic stage. The Polynesian family consists of languages which are so largely analytical in structure that they can hardly be considered agglutinative. It seems that they were carried over to their present abodes by emigrations from the Malay Peninsula and that they were largely broken down through the influence of the Papuan and other tongues on their way thither. There are forms in Polynesian which might be called agglutinating, but the "root word" and the particle are very loosely connected and the "root" is not modified in any way whatever by this addition. Another very remarkable characteristic noticeable in all the three groups is that reduplication is used to denote all sorts of syntactical relations. Thus, in Malay, *raja-raja* is the plural of *raja* (king). In the Polynesian group this is extremely well seen. Thus, in Maori, *haere* (go) and *haerehaere* (walk up and down), in Hawaiian, *huli* (search) and *hulihuli* (to search through and through). in Raratongan *nui* (great) and *nuinui* (very great). The fact that all these three groups are from one original source is no longer doubted. The vocabulary too is very closely akin even between distant languages like the Tongan and Malay. And the probability is that Malay represents the earliest type and Polynesian the latest.

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[1] Tucker, op. cit., p. 141.

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[1] F. Müller, quoted by Tucker, op. cit., p. 143. See also § 23 iii (pp. 29-30) above. Infixes, it may be noted, are found in Malayan group alone.

[2] This is used as a noun, in Malay *surat* means "letter."

[3] Such as for the causal or the intensive.

§ *233. Papuan languages*

The Papuan is a small group of languages which break up the geographical continuity between the Malay and the Polynesian languages. These languages also are mainly of the agglutinating type. The declension and conjugation are fairly regular in type and prefixes and suffixes are both used. But their nature is such that the method of expression "differs from complete analysis only in the degree of separation of the elements".[1] Thus, in the Mafor of New Guinea[2] **ja**-*mnaf* (I hear), **wa**-*mnaf* (thou hearest), **i**-*mnaf* (he hears), **si**-*mnaf* (they hear); and when the object is added we get forms like **ja**-*mnaf*-**au** (I hear thee), **si**-*mnaf*-**i** (they hear him), etc.

§ *234. Australian languages*

The languages of this family are closely knit together and have been derived from a common source. According to some the ancient Dravidian[3] was this source, but this opinion is not universally accepted. They are mainly of the suffix-agglutinating type with varying degrees of consistency in the application. The main subdivisions are shown in Table XXXIV.

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[1] Tucker, op. cit., p. 146.

[2] This is the only dialect fairly studied by scholars.

[3] *Encyclopaedia Britannica* (Cambridge University edition) under "Australia".

Australian Languages	**North Australian**	1. **Vowel-consonant Auslaut**[1]
		2. **Vowel or nasal or liquid Auslaut**
		3. **Vowel Auslaut only**
	South Australian	1. **Victoria group**
		2. **Yuin-Kuri group**
		3. **Narrinyeri group**
		4. **Mixed dialects of the Upper Murray**
		5. **Eastern group**
		6. **Western group**
		7. **Central group**
		8. **Wirdayuru-Kamilaroi group**

TABLE XXXIV.—AUSTRALIAN LANGUAGES

(Facing § 234)

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[1] *Auslaut* means "terminal sound."

Pater W. Schmidt in his *Gliederung der australischen Sprachen* has treated this family quite fully. The division of North Australian into three groups according to special grammatical peculiarities is very noteworthy. Among the dialects of South Australia Narrinyeri is the most important and the Victoria group seems to be the oldest.

Australian aborigines (the Black Fellows) are fast diminishing in numbers. The latest official figure (1936) given is 76,000. So it seems that very soon this family may become completely extinct.

It may be noted here that the now extinct Tasmanian language, the last speaker of which died at the end of the 18th century, has had no connection whatever with any of the Australian languages.

§235. (3) *The African Region*[1]

The languages of Africa (Table XXXV) offer us a great variety of idiom and no less than ten distinct families of speech. The chief of these are (i) the Bushman group,[2] (ii) the Ba-ntu family, (iii) a loose group, more or less geographical, vaguely called the "Sudan group", (iv) the Hamitic family and (v) the Semitic family. The "Sudan group" of languages comprises at least six distinct "families". Only the Arabic and Abyssinian among the Semitic languages are found in Africa.

The problems presented by the African languages are very varied and interesting and they throw unexpected light

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[1] The subject is exceedingly well treated by Dr. Alice Werner in her book on *The Language Families of Africa*.

[2] This division is called "a group", because we do not know enough of the mutual relations of these languages to enable us to arrange them as genetically related; see Werner, op. cit., pp. 15-16.

- (i) **Bushman (or Khoim) group.**
- (ii) **Ba-ntu Family.**
- (iii) Sudan Group
  - (1) Wule
  - (2) Manfu
  - (3) Ngo-Nke
  - (4) Kanuri
  - (5) Nilotic
  - (6) Ba-ntuid
  - (7) Haussa
- (iv) Hamitic Family
  - Lybian (or Berber)
  - Ethiopic (or Kushite)
  - Ancient Egyptian
- (v) Semitic Family
  - (East Semitic)
  - West Semitic
    - (Northern group)
    - Southern group
      - Arabic
      - Abyssinian

TABLE XXXV.—THE LANGUAGES OF AFRICA.

(Facing § 235)

on many questions of language growth and of change in language due to foreign influence.

§ 236. *The Bushman (or Khoim) Group, special characteristics*

The Bushmen are regarded by many as the aborigines of South Africa, and their languages, now rapidly disintegrating, are probably among the most primitive in Africa. Dr. Bleek and his sister-in-law Miss Lloyd collected a great deal of material for the study of these languages.[1] The Bushmen call themselves *khoim* (men) and so their languages are sometimes called the Khoim group of languages. There are numerous dialects noted but their mutual relations are not understood enough, nor have they been referred to any one special type of speech. They are reported "as tending from the suffix-agglutinating to the isolating method".[2] These languages exhibit some characteristics in common with the Sudan group and Zulu has borrowed its phonology from Bushman dialects. There are three important and very specially marked characteristics of these languages.

(i) *"Clicks"*

They have certain peculiar sounds known as "clicks". These are not in the nature of the "explosives" as we know in other languages, but they are aptly described as "suction sounds".[3] There are no fewer than six such to be distinguished, viz. the "dental click" (|), the

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[1] *Specimens of Bushmen Folk-lore*, by Miss Lloyd, London (1911).

[2] Tucker, op. cit., p. 148.

[3] Prof. Meinhof, probably the best authority on African languages, uses the term *Sauglaute* (suction-sounds).

"cerebral click" (!), the "lateral click" (‖), the "palatal click" (‡) and the "labial click" (⊙).[1] These clicks are also found in other languages of Africa as well, e.g. Zulu, where they are probably borrowed. These clicks are a special difficulty for learners of these languages, especially for the Europeans.[2]

(*ii*) "*Gender*"

Another remarkable point about these laguages is the gender. The so-called distinction of gender is not based on sex at all but it seems that a distinction is drawn primarily between *persons* and *things* or *things with life* and *things without life*.[3]

(*iii*) "*Number*"

The methods of plural forming are extremely varied and apparently very irregular. Bleek mentions from fifty to sixty ways of forming the plural. The most primitive method, however, is the reduplication of the noun.[4]

The dialects of Bushmen are shown in Table XXXVI. It seems that the dialects of the Pigmies of equatorial Africa are also connected.

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[1] The symbols enclosed in brackets are the phonetic transcriptions used for these clicks. For the exact method of pronouncing these see Werner, op. cit., pp. 127-128.

[2] Hence one of the early Missionaries, who wrote about the Bushman languages, says that "they cluck like Turkeys". and that "one is inclined to say that they bark rather than speak".

[3] See "the Law of Polarity," § 241 (pp. 360-363). This seems also to have been at the root of the gender distinction in Tamil.

[4] As also in Malay and sometimes in Japanese.

- Bushman (or Khoin)
  - Bushman (or San)
    - Aikwe
    - Aukwe
  - Hottentot (or Nama)
    - Damara
    - Sandawe
  - Pigmy dialects (?)

TABLE XXXVI.—BUSHMAN (OR KHOIN) LANGUAGES

(Facing § 288)

§ 237. *The Ba-ntu family*

The Ba-ntu languages form a very widely extended and a closely knit family[1] occupying the larger part of South Africa. They are pre-eminently prefix-agglutinating languages. The so-called "alliterative concord" which is such a marked feature of these tongues follows almost naturally from the prefix-agglutination.[2] Another notable peculiarity is the absence of grammatical gender. There are not even the masculine and feminine pronouns corresponding to "he" and "she". The name *Ba-ntu* means "men", *ba*-being the plural prefix.

The main divisions of the Ba-ntu are given in Table XXXVII.[4]

The most important language of the Ba-ntu family is the Swahili of Zanzibar, which is a sort of *lingua franca* all over the East African coast. It has some literature and is being cultivated and taught in schools. Formerly it used to be written in Arabic script,[3] but nowadays the Roman script is fast replacing the Arabic.

The South African government is doing much to foster some of the Ba-ntu languages. School-books (in Roman script) are being published for the use of children speaking Ganda, Bemba and Xosa-Zulu. A good many of the ancient Ba-ntu ballads and folk-tales have been collected and put together in book form, thus furnishing valuable material for Ba-ntu folk-history as well as linguistics.

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[1] "None of these diverge from any other more widely than English from German", Tucker, op. cit., p. 138.

[2] See above, § 23, i (p.28).

[3] Werner, op.cit.,p.22.

[4] Tucker divides these languages longitudinally into Eastern, Central and Western. Werner gives a more or less geographical grouping.

[5] This was owing to the Islamic Arabs having become the paramount political power at Zanzibar.

- Ba-ntu language
  - Ganda (North-west of Victoria Nyanza)
  - Ruanda (North-east of Tanganyika)
    - Ruanda
    - Kirunda
  - Swahili (Zanzibar and East coast)
  - East African group (South of Victoria Nyanza)
    - Nyamwezi
    - Pogoro
    - Yao
    - Sena
  - Portuguese Africa (South-east) group
    - Sotho
    - Vanda
    - Kololo
  - Zulu (Zululand and South Africa)
    - Xosa (or Kafir)
    - Zulu
    - Tabale (Matabeleland)
    - Ngomi
  - Central group (North of Zanzibar)
    - Bemba
    - Tonga
    - Lola-Lamba
  - Western group—Herero
  - Congo group—Lolo Nkundu
  - North-West group (Kamaruns)—Duala
  - West African Ba-ntu group

TABLE XXXVII.—BA-NTU LANGUAGES

(Facing § 237).

The table of Ba-ntu languages here given is geographical, but on the whole it agrees well with the actual linguistic facts.[1] The south-east groups show the "clicks" borrowed from Hottentot. The north-west groups show a simpler and purer variety of Ba-ntu free from outside influences. Ganda particularly shows prefixes unknown elsewhere. The Kololo dialect of the south-east Ba-ntu was the language of the Basuto kingdom founded on the Zambesi, west of the Livingstone Falls, about a century ago. It differs considerably from the neighbouring Sotho and thus we are enabled to note the changes brought about during the century. Xosa (or Kafir) was one of the first Ba-ntu languages to be studied by Europeans. The language of the Zulus is very close to Kafir, but the great political importance of this South African warriors has assured it a veay important place in the Ba-ntu family to their language.

Lolo-Nkundu is spoken along a wide tract in equatorial Congo. It is the most important among the very numerous languages of the Congo region.

The West African Ba-ntu group stretches from the north coast of the Gulf of Guinea right up to Sudan. This is undoubtedly a "mixed" group, but whether it is Ba-ntu superposed upon a foreign language or *vice versa* is quite uncertain. Sometimes these languages are also called "Ba-ntuid".

§ 238. *The Sudan group of languages, special characteristics*

This group stretches right across the continent from the West to the East in a comparatively narrow band north of the equator. At one time these were thought to be one "family", but Pater W. Schmidt has shown conclusively that these languages comprise at least half a dozen distinct "families" with Haussa included as a seventh.

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[1] See classification given by Homburger in Meillet and Cohen's *Les Langues du Monde*, pp. 575 ff.

Many of these languages represent on the whole an isolating or analytic type.[1] Their chief character stics are:

(i) Isolating structure, i.e. absence of inflection,
(ii) Monosyllabic roots,
(iii) Absence of grammatical gender,
(iv) Special methods of forming plural,
(v) Small co-ordinate sentences,
(vi) "Descriptive roots".

(i) Isolating structure and (ii) Monosyllabic roots

The monosyllabic roots and the want of inflection have led to the same devices for multiplying sounds as in Chinese.[2] Thus these languages have adopted several "tones" to indicate difference in meaning.

(iii) Absence of grammatical gender

The want of gender is met by adding words indicating "male" and "female," but the pronoun of the third person has only one gender.

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[1] Tucker regards these languages as representing "agglutination in its rudest shape, viz. the simple juxtaposition of particles" (op.cit., p. 147). Extremes meet indeed! For where is the difference essentially between these languages and the highly cultural language of China,—except in the people who use them and in the thoughts they embody?

[2] See below § 252, i (pp. 387-389).

(iv) *Methods of forming plural*

The plural is expressed generally by the juxtaposing of either the pronoun "they" or "these" or the word "people". Plural in individual cases may be expressed, but the conception of plurality, of "more-than-one-ness", is not clearly understood. In some of the languages of Eastern Sudan the plural is expressed by lengthening the vowel: *ror* a forest, plu. *rōr* [1]

(v) *Small co-ordinate sentences*

The syntactical relations are expressed in peculiar ways. Prepositions are conspicuous by their absence. One important result of this absence is that complex ideas are expressed by short sentences made up of a single verb and noun which are *co-ordinated* together. Thus instead of saying "I am going to the town" the Togo language uses the phrase, "I go, reach town ('s) inside";[2] in Ewe the sentence, "he hit him with a stick" is expressed by "he took stick, hit him", "he jumped from the ship into the sea" would be "he jumped, left ship ('s) inside, fell sea ('s) inside".[3]

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[1] Probably there was a heavier stress on the word to express the notion of plurality This might have led to the lengthening of the vowel.

[2] Note also that the absence of a preposition like "of" results in the genitive case being placed *before* the "thing possessed" to indicate the relationship of "possession".

[3] Werner (op.cit., p. 46) notes that some of the Ba-ntu prepositions are, in their origin, such phrases, *udani*, "within" (Swahili) originally meant "stomach". In Zulu *pezulu* "above" is from *pa-izulu*, "on the sky", *pansi*, "below" was *pa-nsi* "on the ground".

(vi) "Descriptive roots" or dhvanyātmaka *words*

One important class of words belonging to this group of languages is variously called "sound-pictures" (*Lautbilder*), "word-pictures" (*Wortbilder*) or "onomatopoeias" or "descriptive adverbs".[1] "These are invariable words imitating, or at least expressing, not merely sounds and movements,...but form, position and even colour, taste and smell...They are functionally adverbs since they qualify the action signified by a verb, but some may be classed as adjectives. But they only apply to one particular action, state or quality, and are, therefore, always used with one special verb or noun and never found in any other connection."[2] Thus, with the verb *zo* to walk, we get in Ewe several dozen phrases like the following:

zo ka ka, to walk upright,
zo dze dze, an assured energetic gait,
zo tya tya, to walk quickly,
zo si si, said of small people, lightly stepping along,
zo boho boho, the heavy walk of a stout man,
zo tyo tyo, the firm and deliberate gait of a tall person,
zo kpudu kpudu, the quick hurried gait of a small man,
zo wudo wudo, a quiet graceful way of walking, especially of women,
zo gowu gowu, to walk with a slight limp, the head leaning forward,
zo lumo lumo, running of small animals, such as rats and mice.[3]

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[1] "Ewe is extraordinarily rich in them", Werner, op. cit., p. 147.

[2] Werner, loc. cit.; the ध्वन्यात्मक words in Bengali are a fair parallel; see Rabindranath Tagore's शब्दतत्त्व, Chap. 1.

[3] Werner, loc. cit.

§239. *Divisions of the Sudan group of languages*

Table XXXVIII shows the main "families".

The Wule languages stretch in a narrow strip across equatorial Africa from west to east. The name *Wule* signifies "men" or "people". They are divided into four sub-groups more or less geographically. Among these the two "mixed" dialects, Fang and Yaunde, are to be noted.

The Man-fu languages spread north and north-west from the Wule group. The name of this group embodies the prefix *man-* and the suffix *-fu*, which are used for making plurals. There are three sub-groups. The most important dialect is the widely understood Ewe belonging to the Central group. This is an important language of commerce and it has recently developed writing as well as a literature. Ewe may serve as typical of these languages. "All the words in the language are derived from simple monosyllabic roots, consisting of a consonant followed by a vowel, each of which is in Ewe a verb..... These verbs ... are probably the primitive roots of the language".[1]

The Ngo-Nke group also gets its name from the peculiar suffixes *-ngo* and *-nke* indicating males. These languages are also considerably mixed up with the Wule and the Man-fu groups as also with the Ba-ntuid. Songhai is an important language of commerce and is understood from the Niger to Timbuktu. The Mandi-ngo group spreads over a vast area all over north-west Africa. Mende group is regarded by some to belong to the Man-fu languages. No doubt this is due to a mixing up of the various tribal dialects.

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[1] Quoted by Werner (op cit. p. 37) from the book of Ellis, *The Ewe-speaking Peoples of the Slave Coast of West Africa* (p. 253).

1. **Wule languages**
    - Eastern group
    - Central group
    - Western group
    - Mixed dialects
        - Fang (with Ngo-Nke and Ba-ntu)
        - Yaunde (with Duala Ba-nt
2. **Man-fu languages**
    - Western group (Kru)
    - Central group (Egba)
        - Ashanti dialects
        - Ewe (Efe)
        - Volta dialects
        - Yaruba (or Egba)
        - Ibo
    - Eastern group (Runga)
3. **Ngo-Nke languages**
    - Songhai group
    - Soni-nke group
    - Bambara (or Bamana) group
    - Mandi-ngo group
    - Mende group (mixed with Man-fu)
4. **Kanuri languages**
    - Tibbu group
    - Kanuri group—Bornu
    - Maba-Begrimma group (mixed with Nilot
5. **Nilotic languages**
    - Ancient Nubian—Nubian
        - Nile dialects
        - Mountain dialects
    - Shilluk group
        - Shilluk
        - Dinka
        - Nuer
        - Bar
    - Kwafi group
        - Kwafi
        - Masai
        - Nandi
        - Suk
6. **Ba-ntuid languages**
    - North group
        - Senegal dialects—Wolof
        - Temnu-Bullom
        - Seren
        - Ful (Pula)
    - Central group
    - South group (Togo)
    - East group
7. **Haussa**

TABLE XXXVIII.—SUDAN GROUP OF LANGUAGES

(Facing §

The Kanuri languages spread from Lake Tchad north-eastwards. Tibbu is found in the Tibesti highlands and in the surrounding desert. Bornu of the Kanuri group is the most important dialect. The Maba-Begrimma is most probably the bridge uniting these languages with the Nilotic.

The most remarkable of the Nilotic languages is the Nubian. Ancient Nubian dates from the 8th to the 11th century of the Christian era, and is preserved in a number of inscriptions Modern Nubian is divided into numerous dialects which can be grouped into two main groups, Nile Nubian and Mountain Nubian. These are spoken in the region along the Nile from Assuan up to Khartum and in the neighbourhood. The Shilluk group extends along the course of the White Nile and the Bahr-el-Jebel and eastwards and southwards up to Lake Rudolf. The Kwafi group contains the important language of the Masai. These people have been important as cattle-breeding nomads, who, spreading from their original home between the Victoria Nyanza and Mount Kenya, have extended all over equatorial Africa penetrating right into South Africa. Hence the Masai language shows a great deal of structural mixing up. There is indeed a good deal of doubt as to its exact position ; some have classified it as a Hamitic language.

The Ba-ntuid languages are, as the name itself implies, closely connected with the Ba-ntu family. They seem to represent some earlier stage in the course of developing into the full Ba-ntu. This much is certain that Ba-ntu languages have migrated to their present position in south-east Africa from an original home in the north-west. And the greatest extent of the Ba-ntuid languages is in north-west Africa. The groups are arranged according to the degree of their approach to the pure Ba-ntu structure.

Of the Ba-ntuid languages the Ful (Pula) dialects spread over a wide area in Sierra Leone and in French Guinea. They are of extreme interest because of their affinities with other African languages both ancient and modern.[1] Mlle. L. Homburger tried in 1929 to work out the relations between Ancient Egyptian and the modern languages of Africa particularly between Ancient Egyptian, Ba-ntu and Haussa.[2] She not merely quotes a number of similar words, but has worked out the close resemblance between the consonants of Ancient Egyptian and of Ful as also the similarity of their verbal conjugation.

Haussa, the *lingua franca* of Middle Africa was at one time classed as a "mixed Hamitic" language. The opinions expressed about it have been so various that it is best (and perhaps also safest) to classify it by itself. Its original home seems to have been in the region between the Niger and Lake Tchad. But as a language of commercial intercourse it is understood over the whole of Middle and West Sudan and it may be heard in the bazars of Tunis, Tripoli, Alexandria, Cairo and all the great cities of North Africa.

§ 240. *The Hamitic family, special characteristics*

This is very important group of languages practically spread over the whole of North Africa.[3] Some of the tribes influenced by these languages have also penetrated far into Central and South Africa. Masai in equatorial Africa near the great lakes, Haussa and Nama (or Hottentot) in the far south-west are the most remarkable instances of this spread of Hamitic influences. Hamitic languages are fully inflected and in several respects are very remarkably like those of the Semitic family.[1]

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[1] See also § 241 (pp. 361-363) below.

[2] *Mémoires de la Société linguistique*, XXIII, pp. 149 ff., quoted by Kieckers, op. cit., pp. 144-145.

[3] Modern Egyptian is Semitic, but Ancient Egyptian was Hamitic. In Abyssinia also the Hamitic type is more ancient than the Semitic.

Their chief characteristics are:

(i) various inflectional devices,
(ii) "tenses" not exactly indicative of time,
(iii) grammatical gender,
(iv) great variety of the plural,
(v) the 'law of polarity".[2]

(i) *Inflections*

The inflections are various and of both the suffix and the prefix type. Nouns, however, usually take suffixes, while verbs have both suffixes and prefixes. There are derived conjugations also like the intensive, causal, reflexive,[3] etc. Some derivative forms are reduplicated, e.g. the intensive in Somali,[4] *lab*, to fold, *lablab* to fold repeatedly; *goi*, to cut, *gogoi*, to cut to pieces. In some forms there is an internal vowel change, e.g. *gal*, to go in, *geli*, to put in.[5]

(ii) "*Tenses*"

The so-called "tenses" do not imply time so much as a distinction between a completed and an incomplete action, contrasting, as it were, the action and the result of the action.[1] The idea of time comes in later, and the "time-tenses" are made up with auxiliaries.

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[1] This has led many to postulate a common ancestral Hamito-Semitic Ursprache. But of course such a type must have been long anterior to any history, very much like the Indo-European Ursprache.

[2] Werner, op. cit., pp. 87-94.

[3] The reflexive would correspond in signification to the *middle voice* of Greek or the Ātmanepada of Sanskrit.

[4]. This method of making the intensive is essentially the same as in I.-E. languages. Reduplication is certainly the most natural device for the purpose.

[5] Comparable to the I.-E. Ablaut and vowel-gradation.

(iii) Gender

The gender is not based on sex distinctions, but as in the Semitic and Indo-European families it is "grammatical". Perhaps it would be more correct to say that nouns are divided into two classes, which answer more or less to our masculine and feminine genders. *As a general rule* the big and strong things are "masculine" and the weak and small things are "feminine". Thus "sword" is masculine but "knife" is feminine, so also "long coarse grass" is masculine and "short grass" or "turf" is feminine, "a large rock" and "elephant"[2] are masculine while "a stone" and "a hare" are feminine.[3] The

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[1] This characteristic of "tenses" is shared by the Semitic family as well. Somewhat similar is the use of the "aorist" (लुङ्) in Vedic Sanskrit as contrasted with the "perfect" (लिट्) ; see Whitney, *Sanskrit Grammar*, §§ 823 and 923. A similar distinction seems to have existed in Greek also.

[2] Of either sex.

[3] Exactly the same difference of large and small (or strong and weak) marks the gender distinctions in those vernaculars of India which still preserve the 'grammatical gender". Thus in Gujarati छरो m. a chopper, छरी f., a knife; बंगलो m., a house (bungalow), बंगली f., a cottage; चोपडो m., a large ledger, चोपडी f., a book; गोळो m., a big ball (like a canon-ball), गोळी f., a bullet or a pill; पटेटो m., potato, पटेटी small potatoes; etc., etc. In colloquial Gujarati we often change the gender of a noun to indicate derision or ridicule, thus, छत्रो m. (usually छत्री f.) umbrella, is used when we desire to ridicule the person using it or when we wish to call attention to its uncouth shape or size.

"feminine" also implies affection[1] and also diminutives. The gender-affixes are distinguished by special initial sounds.[2] As a general rule the masculine shows a *velar* while the feminines have a *dental* consonant as initial; thus in Galla *kanka* (thy) is masculine and *tante* is feminine; in Somali the definite article is *ki* for masculine words and *ti* for feminine;[3] in Haussa the third personal pronouns are *ya*, he, and *ta*, she; and the adjective changes its initial letter to indicate a change of gender, thus, *nagari*, "good" is masculine and *tagari* is the feminine. The dental sound in the feminine, mostly a *t*, is a very notable feature in the Hamitic family, a feature which is also shared by the Semitic.

(*iv*) *Number*

The number is indicated in many ways, There is a dual number surviving in Nama but that is practically, the only language of Africa (outside the Semitic family) which possesses it.[4] The plural is formed in various ways; but it must be noted that each method implies a special kind of plural, for instance, there are, "distributive" and "collective" plurals. Thus in the Ethiopian Khamir language we have *lisa*, a tear, *lis*, tears, *lisse*, floods of tears; *bila*, a moth, *bil*, moths, *bille*, swarms of moths.[1] Small objects like grain, sand, grass, etc., are thought of chiefly in the mass and only on special occasions are they differentiated individually. In such cases these languages *show the original word in the plural* and the singular is formed by adding a suffix, as in the cases mentioned above. Then again objects are divided into various classes in accordance with the special uses to which they may be put, or according to the "categories" to which they may belong. Each of these classes has got a special type of plural. So that the plural suffix serves not merely to indicate the plurality but also to indicate the class to which the word belongs.[2]

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[1] The vulgar habit among the students of Bombay of calling each other दीकरी (daughter) or छोकरी (girl) is due to this reason. Parents sometimes affectionately address their sons in the feminine in Gujarati. This last habit is probably also due to the desire of averting the "evil-eye"—sons being regarded as of greater consequence than daughters.

[2] In Nama the *final* letter distinguishes the gender; *khoi-b* man, *khoi-s* woman.

[3] These are often suffixed to nouns to indicate gender, thus, *wala-ki* the brother, but *wala-ti*, the sister.

[4] Werner remarks (op cit., p. 89), "It belongs to the stage of thought when it is not yet perceived that 'one' and 'more than one', are *categories* which include the whole existing universe...but, e.g. 'twoness' and even 'threeness' are regarded as special conditions needing a separate designations.' Some languages of the Melanesian group have four numbers, *singular*, *dual*, *trial*, and *plural*. It may be noted

(*v*) *The Law of Polarity*

Closely connected with the plural in the Hamitic languages is the very remarkable phenomenon known as

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that the duals of the Semitic and the I.-E. families express originally only those objects which *naturally* go in pairs, like eyes, ears and other such limbs, parents, husband-and-wife, etc., and that from these it extended also to objects considered two at a time even though not forming a "natural pair" (see § 55, pp. 71-76).

[1] The English plurals *fishes* and *fish* are exactly of this type; cf. also German plurals, like *Wörter* (disconnected words, as in a glossary) and *Wörte* (connected words, as in a sentence).

[2] A somewhat similar purpose is intended by the numerous "words" which are added to indicate plurality (the so-called "numeratives") in Chinese; see *Ency. Brit.*, art. "Chinese Language". Similar are the "numeratives" added to the nouns in Persian and in Bengali, especially with numerals, e.g. तिन जन लोक. Cf. also the use of the German words like *Stück*, *Bogen*. etc., with numerals.

the Law of Polarity. It is noted that *nouns change their gender in the plural*; thus in Somali,

hoyo-di, mother, plu. *hoyin-ki*
libah-hi[1], lion, plu. *libahhyo-di.*

This type of plural with change of gender is also found in Semitic where such plurals are explained as "exceptions".[2]

§ 241. *Explanation of the Law af Polarity: the Ful languages*

In order to explain the Law of Polarity[3] we have to consider the very remarkable group of languages of the Ba-ntuid "family" called the *Ful* or *pula*. These languages are found spread over a large area from Sierra Leone to French Guinea. These show very considerable resemblances to the typical Hamitic languages such as Somali, and so some authorities seem to think that they belong to the Hamitic family of languages.[4] At the

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[1] For *libah-ki*; as has been noted above *ki* denotes the masculine and *ti* or *di* the feminine.

[2] For instance the Urdu *huzūr* (plu. *hazarāt)* used for addressing superiors. This word is originally from Arabic. Several varieties of the "broken plurals" in Arabic end in -*t*, e.g. *kātibun* (writer), plu. *kātibatun*; *sāhir* (magician), plu. *sāhiratun*; *ākhun* (brother), plu. *ikhwātun*. "In many relative adjectives the feminine ending -*t* gives the sense of the plural, e.g. *ṣufi*, plu. *ṣufiyatun*. In like manner the feminine form of some words is used for plural, e.g. *qawwās* (bowman), plu. *qawwāsatun*". (Thatcher, *Arabic Conversation Grammar*, p.271.)

[3] The name is taken by analogy from the physical sciences.

[4] Tucker puts these languages among the suffix-agglutinating type (op. cit., p. 148). Ethnologically too the Ful-speaking peoples present a difficult problem.

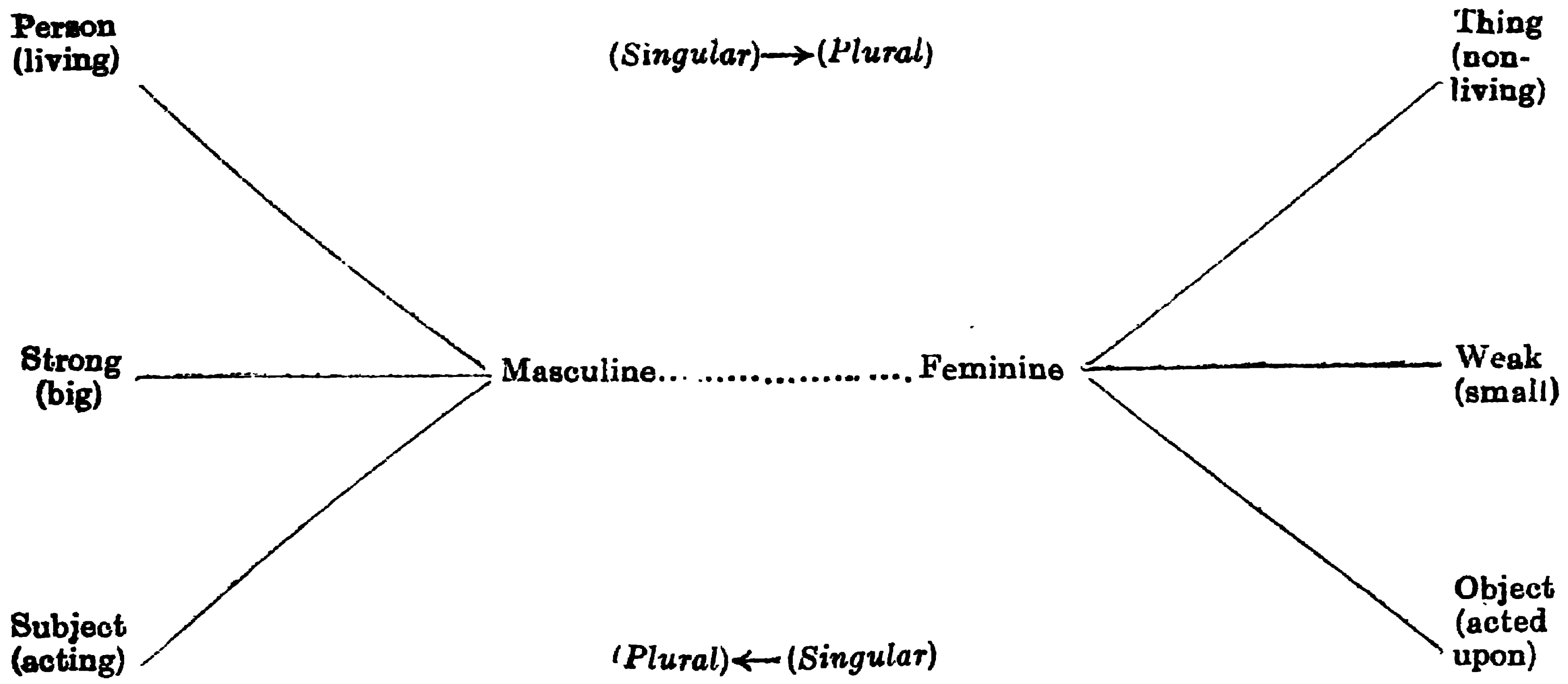

FIG. 18

THE LAW OF POLARITY

(Facing § 241)

same time they have many close resemblances with the Ba-ntu. This group is in fact, regarded as a transition stage between the Hamitic languages of the north and the Ba-ntu family of the south.[1] The nouns are here divided into various 'classes' as in the Ba-ntu, each having a special plural suffix. The one class that stands out more strongly than any other in both the Ful and the Ba-ntu groups is the "person"-class. According to Prof. Meinhof[2] the original division of substantives was into "persons" and "things", or to put in terms of gender, there were two genders "common" and "neuter".[3] Later, there comes in another distinction of "strong" (or the acting) and "weak" (or the acted upon), or again, in the terms of gender, the genders now are masculine and feminine. Meinhof thinks that when any change of idea occurs (even from singular to plural) the primitive mind also demands a change from the one to the other of these mutually exclusive categories, i.e. from "person" to "thing", or from the "strong" to the "weak", or from "masculine" to "feminine" and vice versa. He adduces many examples from both Ful and Ba-ntu to support his contention. The accompanying diagram[4] (Fig. 18) explains this position clearly.[5]

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[1] Werner calls this group "the Key to the Ba-ntu languages" (op. cit., Chap. VI, pp. 100 ff.).

[2] Quoted by Werner, op. cit., p. 110.

[3] Based on the fundamental division of things into "living" and "lifeless". A similar idea is at the bottom of the gender distinction in Tamil.

[4] Adapted from Werner (op. cit., p. 114), who has taken it from Meinhof's *Die Sprachen der Hamiten*.

[5] The diagram would also explain why in Sanskrit the *nominative* of certain neuters is the same as the *accusative* of the masculine.

§ 242. *Divisions of the Hamitic family*

The main divisions of the Hamitic are shown in Table XXXIX.

Ancient Lybian (sometimes also called Numidian) is known through several hundred inscriptions discovered at the site of Carthage. These have not been quite satisfactorily deciphered as yet. The oldest of these go back to the 4th century B.C. A number of words from this ancient language seem to have survived into the modern Berber dialects. Of these Kabyle is spoken in Algiers and Tunis and Shilha in Morocco. Tawarek (Tuareg) extends all over the Sahara, especially towards the south, and it is the language of the fierce veiled warriors of that region. Zenaga is spoken in Mauretania by tribes of the same name. This name is also found in the name of the river Senegal. Zenete is a small group of Algerian dialects. Guanche in now entirely extinct; it was last spoken in the Canary Islands in the 17th century.[1]

The Ancient Meroitic was the language current in the region between the Atabara and the Blue Nile, in the Kingdom of Meroë (3rd century B.C. to 4th century A D.). It is known through a lot of inscriptions and is quite near the Hamitic in structure.

In the Ethiopic (or Kushite) branch of the Hamitic we get a twofold distinction into Low and High which terms describe the geographical peculiarities of the regions where they are spoken. The Bedauye dialects are spoken in and about Suakim and to the east of the Nubian desert. Saho extends from Massawa into the Abyssinian plateau, and the Dinkali dialects are found along the Eritrean coast. The most important of the Low Kushite languages

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[1] Spanish is the language spoken in the Canary Islands today.

	Ancient Languages (extinct)	Modern Languages			
Hamitic Languages	Lybian (Numidian)	Lybian (or Berber)			Kabyle Shilha Tawarek (Tuareg) Zenaga Zenete Guanche (extinct)
	Meroitic	Kushite (or Ethiopean)	Low		Bedauye Saho Dinkali Dialects Somali Galla
			High	Agau group	Bilin Khamir Quara South Agau
				Sidama group	
				Mixed group	Barea Kunama
	Egyptian — Old — Middle —	Younger — Coptic			

TABLE XXXIX—HAMITIC LANGUAGES

(Facing § 242)

is Somali which has an important position as a language of commerce. It is spoken in the "eastern horn" of Africa. Galla is spoken from the borders of Kenya colony right into the mountains of Abyssinia.

The High Kushite languages are found mainly in the highlands of Abyssinia. Khamir is the most important of these languages. The Sidama dialects are spoken from Abyssinia up the shores of Lake Rudolf.

The "Mixed group" mentioned in the Table is of rather doubtful affinities. The influence of Nilotic elements in these dialects has almost completely overpowered their Hamitic structure.

Ancient Egyptian is the most important of the Hamitic languages. It possesses an extremely rich store of inscriptions and a very considerable literature extending over more than thirty centuries. This ancient language can be traced historically through Old, Middle and Younger periods. The earliest inscriptions are in hieroglyphs, but even at that period there are found distinct "alphabetic signs" developed and in common use.[1] With the more extensive use of the papyrus the hieroglyphs developed into a set of cursive signs known as the *hieratic* script. Later on these were in turn made more cursive and a sort of "shorthand" script known as *demotic* was developed. The hieroglyphs, however, continued to be used through all periods of Egyptian history, especially on monuments by reason of their great decorative beauty.

Coptic was the last stage of Younger Egyptian. In the 3rd century A.D. the Bible was translated into Coptic. This produced a fair amount of Christian theological literature. Coptic was written in a script borrowed from Alexandrine Greek. The language finally died out about the end of the 10th century A.D. under the continued pressure of Islam and the Arabic language.

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[1] Flinders Petrie, *Formation of the Alphabet*, pp. 8ff.

Ancient Egyptian has been classified by some as Semitic. Dr. De Lacy O'Leary says: "It shows elements common to the Hamito-Semitic group as well as the characteristics which are distinctive of Semitic, some even of those which appear in later dialects of Semitic. Probably we ought to regard it as a rapidly, perhaps a prematurely, developed dialect of Semitic. Closely akin to the. . .members of the Semitic group, it does not fit in exactly with all the distinctive features, so that it is better, perhaps, to class it as sub-Semitic".[1] It may, therefore, be permitted to regard Ancient Egyptian as a bridge between the Hamitic and the Semitic families. O'Leary thinks it "imperative to employ Ancient Egyptian and the various Hamitic languages to illustrate and explain the forms found in Semitic".

§ 243. *The Influence of Hamitic on African Languages*

Among the African languages so far considered there is a great deal of controversy regarding the exact position of some, particularly of Nama, Masai, Haussa and Ful. We have already mentioned these in their proper places and the last two have been dealt with in some detail. It may be noted that the first two are the languages of well-known nomadic tribes of cattle-breeders, who have been wandering over the whole continent all through the historical period. The Haussa-speaking people also have been great carriers of trade and so also the Ful-speaking people though in a lesser degree.

The exact interrelations and interactions between the various "families" of African languages have not yet been worked out as clearly as those between the various languages of Europe or of India. In particular the "culture drift" southwards from the shores of the Mediterranean has not been worked out in detail.[1] It is unthinkable that the hoary culture of ancient Egypt, which dominated all Africa for several milennia, was without profound effect upon the other languages of Africa. In later days Islam has penetrated African culture through and through and Arabic has influenced every language group in Africa; so it stands to reason that ancient Egypt did the same in the centuries long past.

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[1] *Comparative Grammar of the Semitic Languages*, p. 5.

The Masai people certainly came into close touch with the southern fringes of the empire of Egypt and whatever Hamitic elements there may be in their language might be traceable to this influence. The Namas have been known to have gone their present territory from somewhere in the far north. But the whole question is so obscure and complex, particularly in the almost complete absence of any recorded history, that we may well despair of getting at any solution whatever. Still a patient study of folklore might point to cultural contacts and these in turn might lead to language contacts being established. African history is as it were only just opening out its introductory pages.

§ 244. (*v*) *The Semitic Family in Africa*

The most important member of this family found in Africa is Arabic.[2] This spreads all over North Africa from

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[1] As a small instance we may mention how the Roman influence in North Africa (Tunisia) led to the word *orta* being adopted in some of the Berber dialects in the sense of "garden."

[2] Arabic was introduced with the Islamic conquest. It has influenced most profoundly the whole of the culture and all the languages of Africa.

Morocco to Suez and over the whole of Egypt as well. In Algeria and Morocco it is the official language. The ancient Punic language spoken in Carthage was also Semitic.[1] Further south the ancient Abyssinian or Ge'ez was a Semitic language[2] introduced very early into Abyssinia and its descendants still survive in Abyssinia. Amongst these is Amharic the official language of the country. There are other minor dialects of Abyssinia like the Tigre and Harari which are also Semitic. The details of this family will be considered under the Semitic languages of Eurasia because this family has reached its highest development in Asia.[3]

§245. *(vi) The Language Families in Eurasia*

The large land-mass of Eurasia has been from the earliest times the scene of human activity and most of the greater races of humanity and civilisations of the past have taken their rise here. Hence it should not be a matter of surprise to find the most important language families in this region. Most of these languages have been satisfactorily classified. There are, however, still several important languages which have as yet had no definite position assigned to them in any of the known families. These constitute a sort of miscellaneous group, and we find such "unrelated" languages among the ancient as well as the modern ones. The large majority of the languages of Eurasia are well cultivated and possess valuable literatures. Many of them have been recognised vehicles of world-wide civilisations in the past, as well as at present. Table XL shows the important linguistic families of Eurasia.

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[1] Carthage was a Phœnician colony.

[2] Still used in the Abyssinian Church for liturgical purposes.

[3] See below §§ 254 ff. (pp. 396 ff.).

LANGUAGE FAMILIES OF THE WORLD

1. Languages of the Far North
    - Arctic America group
    - Hyperborean (or Palaeo Asiatic) group
2. Ural Family
    - Finno-Ugric
    - Samoyed
3. Altai Family
    - Turki
    - Mongol
    - Manchu
4. Caucasian Family
    - Circassian
    - Kartvelian
5. Tibeto-Chinese Family
    - Yenissi-Ostyak
    - Thai-Chinese
    - Tibeto-Burman (Already considered in Chapter XI, pp. 214-220).
6. Semitic Family
    - East Semitic
    - West Semitic
        - Northern group
            - Canaanite
            - Aramaic
        - Southern group
            - Arabic
            - Ethiopic
7. Indo-European Family (Already considered in Chapter XII, pp. 268-325).
8. Dravidian Family (Already considered in Chapter XI, pp. 220-238).
9. Austric Family
    - Austronesian (Already considered, pp. 336-339).
    - Austro-Asiatic (Already considered in Chapter XI, pp. 210-214).
10. **Unclassified Languages**

TABLE XL.—LANGUAGES OF EURASIA

(Facing § 245)

Of these the seventh or Indo-European family has been already considered separately by itself in Chapter XII, while the Dravidian family, the Austric family [1] and the Tibeto-Burman branch of the Tibeto-Chinese family together with the Indo Aryan branch of the Indo-European family have been considered separately in Chapter XI on "the Languages of India".

§ 246. *Languages of the Far North*

(*a*) *The Arctic-America group*

The Eskimo (or Inuit) languages are closely linked up with the dialects of the Eskimo people of Asia. In fact it seems that the Eskimos of north-east Asia have come from America. These languages fall into two well marked groups: 1. the Eskimo group, and 2. the Aleutian dialects. True Eskimo (Inuit) dialects stretch across the whole of Arctic America from Greenland up to Alaska and thence across the Behring Straits into north-east Asia. Of these dialects Greenland Eskimo is the most important. It is partly holophrastic and though it has developed a large number of "suffixes," still most of the "words" in this language have to be rendered into English by sentences or phrases. One of the Eskimo dialects—that of Labrador has been recently reduced to writing and is developing a new literature. In Greenland however the written language is Danish. The Aleutian dialects are spoken in the festoon of islands stretching from the extreme north-west corner of Alaska, across the Behring Sea right into Asia.

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[1] The Austro-Asiatic branch has been dealt within §§ 167-170 (pp, 209-218) and the Austronesian in §§ 231-232 (pp 335 339).

Some writers regard the Eskimo languages to be a branch of the Atlai family. But this is doubtful at best.

(b) *The Hyperborcan group*

This is a small group of languages in the north-east corner of Asia. They are sometimes named the *Palaeo-Asiatic* group of languages. We are not even sure whether these languages are at all related to each other. They are simply put together for geographical reasons. There are three main groups, each divided into various subdivisions more or less geographically. The Yukagir dialects are spoken along the shores of the Arctic Ocean and among the Yakuts of north-east Asia. The Kamchatka Dialect is called also *Itelmish*, because the people call themselves *itelmen* (i.e. the original people).

The Ainu people are found in the northern islands of Japan, in South Sakhalin, and on the lower Amur. Gilyak is spoken in North Sakhalin. Table XLI shows these languages of the Far North.

§ 247. *The Ural and the Altai Families: special characteristics*

These two families were once put together and named "Scythian" or "Turanian" by the older generation of philologists Both these cover a vast area extending from the Atlantic Ocean to the Sea of Okhotsk and occupying the whole of the northern portion of the Old World. There are also important offshoots reaching southwards to the Mediterranean. Whether the whole of these could be classed as a "family" in the true sense had been doubted by many and recent research has definitely classed them as two "families". There are several important groups within each, which contain various closely related

1. **Arctic America group**
    - **Eskimo (or Inuit)**
        - Eastern
            - Greenland
            - Labrador
        - Central
        - Western
    - Aleutian dialect
2. Hyperborean (or Palaeo-Asiatic) group
    - Yukagir dialects
    - Chukchi-Kamchatka group
        - Chukchi
        - Koryak
        - Kamchatka (or Itelmish)
3. Ainu dialects
    - Ainu
    - Gilyak

TABLE XLI.—LANGUAGES OF THE FAR NORTH
(Facing § 246)

languages. But the relationship between these groups themselves are rather hard to determine exactly. Both the families, however, possess two chief characteristics, viz., (*i*) Suffix-agglutination and (*ii*) Vowel harmony.

(*i*) *Suffix-agglutination*

All these languages have one characteristic in common, viz., "the typical agglutinative device, by which an unlimited number of specially dynamic terminations may be affixed to an unchangeable root".[1]

(*ii*) *Vowel-harmony*

Another very important point of agreement between these languages is the principle of "vowel-harmony". Owing to this the vowel of the main root determines the vowels of all the suffixes.[2] Thus in Turkish **ev-*ler*** (houses) but **at-*lar*** (horses). In Magyar the plurals of the nom., acc., and dat. of *Magyar* are respectively *Magyarok*, *Magyarok***a***l*, and *Magyarokn***a***k* respectively, but the corresponding forms of *Török* are *Törökök*, *Törököket* and *Törökökn***e***k*. The main root being of primary importance is distinctly uttered, while the suffixes, being merely of secondary importance, only re-echo, as it were, the predominant vowel. This law of vowel-harmony is of later growth in these languages and the universal prevalence of this law (more or less perfectly) in all the Ural and Altai languages distinctly points to a common origin. Individual languages differ widely and have changed enormously owing to contact with other language families.[3] The races that use them are for the most part nomads and hence great divergences between dialects are not at all surprising.

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[1] Tucker, op. cit., p. 180.

[2] Cf. the law of alliterative concord in the Ba-ntu languages, § 237 above.

[3] Thus Finnish has become almost inflecting (I.-E.type) in structure,

§ 248. *The Ural Family*

The Ural family is divided into two main branches, of which the first has three and the second five groups.

Each of these has further sub-divisions. The classification is shown in Table XLII. It is perhaps not wholly free from objection but it may be regarded as satisfactory on the whole.[1]

As shown in the Table the Ural Languages are divided in the first place into two main branches, the Finno-Ugric and the Samoyed. The former is further subdivided into 1. Finnic, 2. Permian and 3. Ugric groups. The Finnic group consists of various languages spoken in Finland and North Russia up to the White Sea, in Esthonia, in Livonia and in Lapland. Finnish (or Suomi) is a language of culture and possesses a good literature going back to the 13th century. It possesses a remarkable national epic poem, the *Kalevala*. The Karelian stretching from the White Sea to Lake Ladoga has several well-marked dialects. Votish was the dialect spoken round about Leningrad but is now almost extinct. Esthonian possesses some literary remains going back to the 16th century. With the establishment of Esthonia as an independent republic the language and literature are being revived. Livonian is becoming rapidly extinct, being replaced by the neighbouring Indo-European Lettic (of Latvia). Tchermassic dialects are spoken in the north-central provinces of Russia and Mordvinic is spoken along the course of the middle Volga. Lappic possesses several dialects differing according to the languages in their neighbourhood. Ethno-

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[1] From Kieckers, op. cit., pp. 55 ff.

- Ural Languages
  - Finno-Ugric
    - Finnic
      - Finnish (or Suomi)
        - East Finnish
        - West Finish
      - Karelian
      - Votish
      - Esthonian
      - Livonian
      - Tcheremissic
      - Mordvinic
      - Lappic
    - Permian
      - Syryenic
      - Votyak
    - Ugric
      - Ostyak
      - Vogul
      - Magyar (or Hungarian)
  - Samoyed
    - Yurak
    - Tavgy
    - Yenissi Samoyed
    - East Samoyed
    - Kamassin

TABLE XLII.—URAL LANGUAGES

(Facing § 248)

logically the Lapps are distinct race. They seem to have spoken another language originally, and they borrowed the language of the Finnish people later on when they became their neighbours.

The Permian dialects are spoken over an extensive area. Syryenic has some literature dating from the 14th century. Votyak is very closely related to this and occupies a more southernly position.

Of the Ugric group Ostyak is spoken in Siberia on the Ob and the Irtish, and Vogul is spoken in the Ural mountains by only a few thousand human beings. The most important Ugric language is Magyar (or Hungarian). It has a fine literature, the oldest text of which is a funeral oration dating from the first quarter of the 13th century. Most of the early Magyar literature deals with Christian Theology.

The Samoyed dialects are scattered over arctic Siberia from the White Sea eastwards to Khatange Bay. Yuraki is spoken in the tundras from the White Sea to the Yenessi, and Tavgy from the Yenessi to Khatanga Bay. The Yenissi Samoyed dialects are found on the lower Yenissi. East Samoyed is found on the upper Ob and its tributaries. Kamassin dialects are spoken in Sanyan mountains and these have been in close touch with Turki dialects.

§ 249. *The Altai Family*

This family of languages is a clearly defined linguistic unit. At one time these were put together with the Ural languages as one "family" owing to certain close resemblances and common characteristics. It seems that the Ural and the Altai families are very closely related much as the Hamitic and the Semitic families are. There has been considerable mixing among the various tribes and consequently much borrowing on both sides. As shown in Table XLIII there are three main branches, Turki, Mongol and Manchu.

Of the Western Turki languages the Khirgiz dialects occupy the steppes from the Caspian and the Volga up to the Altai mountains. Bashkir is found in the South Urals. Chuvash is spoken on the Volga. Among the Southern Turki languages the most important is Osmanli Turki, usually called Turkish, and in many respects it is the most notable of the Altai languages. It has a very fine literature, and until recently the language was dominated by Arabic and Persian elements especially as regards the vocabulary. But since the rise to power of the great national hero Mustafa Kemal Ata-Turk there has been a renaissance of the language and literature. The Arabic script has been definitely discarded and the Roman has been adopted in its stead.[1] But what is linguistically of far greater importance there has been a steady effort made to replace the Arabic-Persian loan word by words of genuine Turki origin. The extreme flexibility of agglutination in this language[2] will undoubtedly make this attempt quite successful. The Turkoman dialects are spoken south of the Oxus and extend westwards right up to the Caspian Sea. Of the Central dialects the Uzbek (or Osbeg) extends eastwards right into Chinese Turkestan. Of the East Turki dialects Baraba is found between the Irtish and the Ob, Abakan on the upper Yenessi, while the Soyoni dialects connect up with the Samoyed Kamassin in the Sanyan mountains. Uigur dialects are spoken in South Thian-shan. Kök Turki language is now extinct but is

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[1] A similar reform was heard of some time ago as regards Irānī, but it has not yet been carried out.

[2] See above § 22 (pp. 25-27).

- Altai Languages
  - Turki
    - Western
      - Khirgiz
      - Bashkir
      - Chuvash
      - Irish dialects
    - Southern
      - Osmanli (or Turkish)
      - Turkoman
      - Azarbaijan dialects
      - Anatolian
    - Central
      - Kashgar dialects
      - Yarkand dialects
      - Taranshi
      - Sartish
      - Uzbek (or Osbeg)
    - Eastern
      - Altai Turki
      - Baraba
      - Abakan
      - Soyoni
      - Karagassi
      - Uigur
      - Kök Turki
  - Mongol
    - Yakut
    - Kalmük (West Mongol)
    - Afghan Mongol
    - Buryat (East Mongol)
    - East Mongol
      - Khalkha
      - Shara
      - Tangut (extinct)
  - Manchu
    - Manchu
    - Tunguse

TABLE XLIII.—ALTAI LANGUAGES

(Facing § 249)

known through some inscriptions of the 8th century discovered near the river Orkhon south of Lake Baikal.

Among the Mongol languages are to be noted the Yakut dialects of north-east Siberia spoken along the course of the Lena. Some regard these as transitional from the Turki. The most widespread of the Mongol languages is Kalmük or West Mongol which starting from the original home in Zungaria in Eastern Shian spreads south of the Gobi desert, through Kökö Nor in Tibet and the Kan-Su province of China right up to the Altai mountains. Westwards the Kalmüks have spread into the valley of the Volga right up to Astrakhan and also into the Khirgiz steppes. Afghan Mongol is a dialect spoken between Kabul and Herat. It is strongly influenced by Iranian dialects Buryat or North Mongol dialects are spoken in Irkutsk round the shores of the Lake Baikal. East Mongol has three important groups: Khalkha north of Gobi between the Altai range and Manchuria, Shara spoken along the Great Wall of China and Targut extending into north-east Tibet.

The Manchu branch is divided into the Manchu group in Manchuria and Tunguse which extends from the Yenessi eastwards and southwards up to the Seas of Okhotsk and Japan. The total number speaking Tunguse dialects is estimated to be only 20,000.

Some scholars would like to include two more branches in the Altai family, Korean and Japanese. But there seems no definite connection established as yet. A few would even regard the Eskimo languages as a branch of the Altai family.

§ 250. *Caucasian languages*

The Caucasian family had for some time been put among the inflecting languages, but they are now classed definitely among the agglutinating languages. Both suffix and prefix-agglutination are found and the object pronoun is even incorporated with the verb. Then again the agglutination is in many cases indistinguishable from pure inflection. In verbal conjugation, for examale, it is very hard sometimes to make out even the "root".[1] The reason for the very complicated structure of these languages probably lies in the fact that this region has been all through history a refuge of various peoples from both Asia and Europe, when hard pressed by invasions of warlike tribes. The extremely mountainous character of the region has resulted in the formation of a large number of dialects.[2] These dialects have developed more or less in utter independence of each other and it is sometimes difficult to imagine that they have all had a common parent. The main divisions of this family are indicated in Table XLIV.

The North Caucasian group is found mostly on the northern slopes of the Caucasus range. Kabardin is spoken on the river Terek between the two peaks, Elburz and Kasbek. Circassian was once spoken over the entire country south of the river Kuban, but since the conquest of the country by Russia the Circassian people have migrated mostly to Asia Minor and Syria. Ubykish is a very little known dialect which was once spoken all along the Black See coast. At present, however, almost all the speakers of this dialect are settled in Turkey and are becoming speakers of Turkish. The Abkharish dialects are found along the Black Sea coast also. The Chechenish and the Lesghian groups are found in Daghestan on the eastern

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[1] Thus from the forms *ara*, *ura*, *aisara*, *unda*, *anda* and *ā* it is hard to know that the root is *ai*, *to* make. (Tucker, op.cit., p. 150.)

[2] As was also the case in Greece.

- Caucasian Languages
  - Circassian (North)
    - Western
      - Adizĕic
        - Kabardin
        - Circassian
      - Ubykhish
      - Abkharish dialects
    - Eastern
      - Chechenish
      - Leghian
  - Kartvelian (South)
    - Georgian (or Grusinish)
    - Mingrelian
    - Lasish
    - Svanian (or Svanetish)

Table XLIV.—Caucasian Languages

(Facing § 250)

side, and there are numerous dialects of these scattered throughout the valley.

South Caucasian or Kartvelian is found on the southern slopes of the Caucasus. The most important language of this group, and indeed of the whole Caucasian family, is Georgian, the speech of Tiflis. It is the only one of this family that possesses a literature, which dates from the 5th century A.D. There are numerous dialects mentioned. Mingrelian extends up to Batum and Lasish is spoken in the neighbouring districts of Asia Minor. Svanian (or Svanetish) is found in the highlands of South Caucasus.

The mutual relations of all these languages have not as yet been clearly made out, nor is the problem of a possible "parent language" for them at all near solution. Recently Marr, a Russian linguist, has tried to divide these languages according to their phonetic peculiarities. But his conclusions do not seem to be quite tenable. The further question of the relations between the family and the Indo-European had best be left unsolved for the present.

§251. *The Tibeto-Chinese (or Monosyllabic) Family*

The Tibeto-Chinese or Monosyllabic family of languages is a remarkable group of languages spread over a wide area in eastern and south-eastern Asia. After the Indo-European this is the family which possesses the largest number of speakers. The chief subdivisions are as shown in Table XLV.

This is a very closely knit family, the more so because besides the geographical unity there is also a cultural, religious and (to a considerable extent) an ethnological unity as well.

- Tibeto-Chinese Languages
  - Tibeto-Burman (Table IX, p. 216)
  - Thai-Chinese
    - Thai (or Siamese)
      - Northern (Table IX, p. 216)
      - South-eastern
        - Siamese
        - Lao
        - Lü
        - Khun
      - Eastern
        - Hainan dialects
        - Mainland dialects
    - Annam-Muong
      - Annamite
        - Upper Annamite
        - Tonkin dialects
        - Cochin-China dialects
      - Muong
    - Karen dialects
    - Si-lo-no dialects
    - Chinese
      - Northern
        - Peking
        - Kuan-hua (Mandarin)
      - Southern
        - Canton
        - Hakka
        - Amoy
        - Nanking
  - Yenissi dialects
    - Yenissi dialects
    - Kottish (extinct)

TABLE XLV.—TIBETO-CHINESE (or MONOSYLLABIC) LANGUAGES

(Facing § 251)

The Tibeto-Burman branch has already been considered in some detail as also the Northern Thai languages.[1]

The Thai-Chinese branch is divided into five groups. But the "roots" differ very considerably in different groups of dialects. So much so that some have actually doubted if all these at all constitute one "family". They think that these entirely different root-vocabularies might be explained by these languages themselves having been originally entirely different and unconnected.[2] In Chinese itself although the vocabularies of the various dialects *appear* utterly unconnected, still as a matter of fact connections can be established historically. There is therefore no reason why what has happened in the Chinese branch might not also have happened in the whole family, between the various branches and groups themselves. The great difficulty is to know the exact pronunciation in ancient days, especially in the absence of any literature.

Of the Thai or Siamese group the most important language is Siamese which possesses a rich literature. The earliest text is dated 1293 A.D. The language also possesses its own script. The other dialects of south-eastern Thai are found along the courses of the Menam, Mekong and Salween rivers. The eastern group of Thai is divided into two distinct dialects, that of the island of Hainan and that of the mainland of China lying opposite.

The literary language of Annam has been preserved in a script borrowed from the Chinese. It had been already in use for inscriptions as early as the 14th century. The earliest Annamite manuscript dates a century later. In the 17th century Jesuit missionaries from Portugal adopted this script for this language and various works have been produced in the Roman script as well. The Muong dialects are found in Tonkin and North Annam.

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[1] See Table IX (p. 216), and §§ 171-174 (pp. 214-221).

[2] E.g. Tucker, op. cit., pp. 127-128.

The Karen dialects are spoken in the valleys of the Irawadi and its tributaries. At one time it was thought that they were a "pre-Chinese" group upon which Chinese idiom had become grafted. But the Chinese element in these is strong enough to warrant their inclusion now in that family.

The Si-lo-no group consists of dialects spoken over the basin of the Yang-tse-kiang. Most of these are mountain dialects without any literature whatever.

The Yenissi group of Tibeto-Chinese is subdivided into two of which the Kottish is now extinct. The other group is sometimes also called the Yenissi Ostyak, but it is better to drop the term Ostyak so as not to confuse it with the Ugric Ostyak. Nor must these dialects be confused with the Samoyed dialects of the same region and the same name.[1]

§ 252. *Chinese, special characteristics*

The typical language of the Monosyllabic family is Chinese. It has been the language of a highly civilised race possessing at least 5,000 years of a very high and uninterrupted culture. It boasts of possessing an unbroken literary record from the earliest times up to the present day. It is a language which has served every purpose of a civilised race in every phase of human activity. The possession of literary records and the high sanctity attached to the older classics have undoubtedly helped in keeping the written language uniform. The written language, however, differs very considerably from the spoken. The peculiar characteristics of the language have affected the development both of the spoken and of the written dialect.[1] Some think that Chinese has reached its present stage of being an isolating language after having passed through some sort of inflectional stage. There are, according to some scholars, traces and relics of some suffixes to be found among the ancient records. This is, however, at best a doubtful point, and all scholars are by no means in agreement about this. As a matter of fact even from the very earliest records we possess the language in substantially the same form as at the present day. The main characteristics of Chinese, following and directly derivable from its monosyllabic-isolating character, are:

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[1] See Table XLII, p. 376.

(i) the 'tones',
(ii) coupling of words in pairs,
(iii) a special type of writing, having one symbol for one word, and
(iv) absence of all *formal* grammar.

(i) The "tones"[2]

When the working apparatus of a language is monosyllabic and at the same time no form-building with the help of prefixes or suffixes is allowed we must either have a very large number of distinctly recognisable monosyllabic vocables or must resort to special devices for multiplying these monosyllabic sounds, so as to define clearly what is meant. We may apply this principle to

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[1] For details see *Encyclopaedia Britannica* (Cambridge edition), art. "Chinese Language"; also Giles, *China and the Chinese*, Chap. I. The introductory chapters of Sir Walter Hillier's *The Chinese Language and How to Learn It* (pp. 1-36) also give a lot of useful information on this point.

[2] Some of the languages of Sudan in Africa also show this characteristic and for the same reason as Chinese. See § 238 (p. 348) above.

Chinese and see how the language has actually developed under these special circumstances. In Chinese dictionaries we have in round numbers 42,000 separate words.[1] Of these an average educated man might need 4,200 to express his usual wants. If there had been as many distinct monosyllabic sounds in the language there would have been no difficulty. But there are only about 420 vocables capable of being clearly distinguished in the Mandarin or Peking dialect.[2] Hence, on an average, every syllable in the spoken language would have to do the duty of indicating ten different words. This would certainly cause confusion in the language, unless some means were invented to overcome it. This is done by having the ten words under each sound "distributed over four separate groups, distinguished by certain modulations of the voice, known as the *tones*, so that there would be only an average of 2½ words liable to actual confusion".[3] There are homophones in every language, but the context—"the logic of circumstances", as Giles calls it—is quite sufficient to point out what a word means in a particular set of circumstances. These tones are four in number.[4] These form an integral part of the word and together with the vocable serve to define its exact meaning. These have been described as follows:[1] 1st tone: *Dead* (a raised monotone, with slightly plaintive inflection); 2nd tone: *Dead ?* (simple query); 3rd tone: *Dead ?* (an incredulous query long drawn out); 4th tone: *Dead !* (a sharp and decisive answer). The Chinaman, of course, learns them intuitively and can sharply distinguish them one from the other. Thus *yen*$_1$ is "smoke", *yen*$_2$ is "salt", *yen*$_3$ is "eye" and *yen*$_4$ is "goose".

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[1] I have used the figures given by Giles in his book (pp. 19 ff.). The great Standard Dictionary, he says, gives 44,000 words.

[2] The Cantonese dialect, however, possesses between 800 and 900 distinct vocables. The comparatively small number in Mandarin is due to the fact that certain sounds are not found in it. Thus voiced sounds (like *g*, *d*, *b*) are entirely absent and there is but one syllable *(erh)* containing *r*. The loss of vocables is due to the ordinary process of "phonetic decay", and partially also to the influence of the Mongol population *(Encyclopaedia Britannica*, loc. cit.).

[3] Giles, loc. cit.

[4] Chinese writers actually enumerate eight, each of the four tones being subdivided into "upper" and "lower".

(ii) *Coupling of words in pairs*

But this is not enough. There are occasionally tone-deaf persons even among the Chinese[2] and in order that there may be no confusion at all the Chinese define a great many words still further by putting another word in juxtaposition with it. Thus if they want to speak of the "eye", they always say *yen*$_3$ *ching*, the word *ching* meaning "eyeball" serving definitely to fix the meaning of *yen*$_3$. So also *yen*$_2$ "salt" is never pronounced alone, but the defining word *pai* (fine) or *hei* (coarse) is prefixed. This device makes confusion nearly impossible in the spoken language even for people who are tone-deaf.[3]

(iii) *Chinese writing*

But the very special character of the Chinese language is the extremely elaborate system of writing which has been developed and has been used by the people during several millennia. This system of writing is essentially pictographic and ideographic[1] and this is due directly to the monosyllabic-isolating character of the language itself. The written or classical language is a highly polished medium for the expression of human thought and there is no shade of thought which cannot be adequately expressed in Chinese. The limited number of vocables and the absence of grammatical terminations would have made the syllabic or the alphabetic stage of writing exceedingly confusing, even though means had been discovered to represent the tones. There is another reason besides, viz. that the gradual development of the language would inevitably lead to variations in the sounds of words, and the dialectical variations would also make the confusion still worse, because the same sound would in different dialects (or at different periods of the same dialect) mean quite different things. The written characters, having developed directly as a result of the special characteristics of the language are, therefore, the visible signs of the Chinese genius and constitute the most potent binding and stabilising force in Chinese culture. They appear at first sight to be exceedingly confusing, but a patient study discloses a very elaborate method about this writing.[2] There are ideographic as well as phonetic elements in each character, and to a practised student each character conveys at once the exact idea as well as the sound. The full value of this elaborate scheme of writing could be understood from the fact that modern ideas of the west have been successfully represented by the Chinese in their script.[1] Modern missionaries have been trying to introduce some variety of Roman script into China with appropriate marks for the tones but the result has been "a mere jumble of sounds, utterly unintelligible".[2] But quite apart from this difficulty of a clear phonetic representation of the Chinese language there is one very important consideration of the essential characteristics of Chinese writing which Giles explains in these very clear words :[3] "The characters are a potent bond of union between the different parts of the empire with their various dialects.[4] If they should ever fall into disuse, China will have taken a first and most fatal step towards internal disruption. Even the Japanese, whose language is not only remarkably free from dialects, but polysyllabic and therefore more suitable for an alphabetical script, have utterly refused to abandon the Chinese script, which in spite of certain disadvantages has hitherto triumphantly adapted itself to all the needs of civilised intercourse".[5]

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[1] *Encyclopaedia Britannica*, loc. cit.

[2] As evidenced by the story of the Emperor Wu-ti and the learned Shen-yo (A.D. 441-513) who was the first to classify the tones systematically. See *Encyclopaedia Britannica*, loc. cit.

[3] It may be noted that the coupling of the words in pairs is a device used chiefly in the colloquial, but not in the highly ornate and intricate Chinese of the classics.

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[1] The various scripts of the world are of four distinct types : (1) *Pictographic*, where each symbol is a picture of the thing represented; (2) *Ideographic*, where the symbol does not represent directly the thing it depicts, but suggests an idea connected with it ; (3) *Syllabic*, where the symbol denotes a *sound* (appealing to the ear) which is a syllable (generally the first) of the word represented by it; and (4) *Alphabetic*, where each element of the syllable is represented by a separate symbol.

[2] For details consult the authorities cited above, p. 386, ftn. 1.

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[1] E.g. "discuss-govern-country-assembly" for Parliament, or "rise-descend-machine" for a lift, or "exclude-oppcsite" to denote the Absolute.

[2] An alphabet consisting of only 39 signs in all was suggested some time ago by the Chinese Board of Education. However, see Giles in the article in *Encyclopaedia Britannica.*

[3] Ibid.

[4] Not only within the geographical limits of China, but within the wider "Empire of Chinese Culture", the writing is the most powerful bond of union.

[5] Moreover it would be foolish to suppose that such eminently practical peoples like the Chinese and the Japanese would have stuck to this admittedly cumbrous system of writing, unless they were convinced of the more than compensating advantages.

(iv) *Absence of formal grammar*

This last is perhaps the most remarkable characteristic of this group of languages. The Chinese have never had any works on "grammar" in our sense of the term. In fact, they "do not possess and never have possessed in their language any term equivalent to 'grammar'. The language is quite beyond the reach of the application of such rules as have been successfully deduced from Latin and Greek".[1] As far back as we can get literary records in Chinese (and they go back to at least ten centuries B.C.)[2] we find that the language has been monosyllabic and "these monosyllables seem always to have been, incapable of inflection, agglutination or change of any kind. They are in reality root-ideas, and are capable of adapting themselves to their surroundings, and of playing each one such varied parts as noun, verb (transitive, neuter or even causal), adverb and conjunction".[3] The Chinese themselves have never produced any work on formal grammar for the simple reason that their language does not lend itself to this sort of treatment. They classify their words into "full" and "empty" and the former again into "living" and "dead". "Living" words are those which denote an action or activity of some type and "dead" are those which indicate things acted upon.[4] An "empty" word is one which merely serve to define more closely the sense of another ("full") word to which it is attached, and consequently these "empty" words most nearly approach our grammatical suffixes.[1] Thus the word *liao*, which by itself stands for the idea of "completion", when used as an "empty" word, corresponds to the inflection of the past tense in the I.-E. languages; e.g. *t'a lai* (he comes), but *t'a lai liao* (he came, lit. "he come finish"). The various "numerative" particles employed in Chinese often serve merely as "empty" words to indicate the plural. In short *every word is a root-idea*, and only its use in a sentence can determine whether it is to be a noun or an adjective or a verb (active or passive or causal). Thus the word *ssu* may mean, "to die", "dead" or "to kill" according to the context. The context is determined chiefly by common sense and after some practice it is easy enough to get into the Chinese style.[2] Thus a sentence like "*affair why must ancient*" would mean in ordinary language, "why need one stick to the ways of the ancient in this matter?" So also "*home one below heaven*" would mean "all under the canopy of Heaven are one family". And "*few what see many what strange*" means "the less a man sees, the more he has to wonder at".

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[1] Giles, *China and the Chinese*, p. 10.

[2] Giles indeed mentions that some of the national ballads might be assigned to the 18th century B.C. (*Encyclopaedia Britannica*).

[3] Giles, *China and the Chinese*, loc. cit.

[4] Giles (*Encyclopaedia Britannica*) seems to imply that the "living" and "dead" words correspond to our verbs and substantives respectively. But this correspondence is not to be taken too literally. This division seems to be based more upon the fundamental differences of types as has been discussed above under the Law of Polarity (§ 241).

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[1] On this account some people have maintained that these "empty" words are the relics of a prehistoric inflected stage of the Chinese language.

[2] "Pidgin-English" is in fact Chinese spoken with English words. When a Chinaman wishes to say "Do you want me ?" he says, "You wantchee me no wantchee ', for he merely translates word for word the Chinese *ni yao wo pu yao*. Of course the book language needs far greater practice, because the style is very terse and always full of allusions to the ancient Classics.

§ 253. *History of the Chinese Language*

The main divisions of Chinese are Northern and Southern. There are numerous dialects which differ so much from each other in phonetics that two Chinamen from different parts of the land cannot understand each other speaking. If they can read and write they can exchange their thoughts and carry on a "conversation" through *writing*,[1] for Chinese writing has remained uniform and unchanged all through. Pronunciation has differed not merely from province to province but from age to age also. These changes have doubtless occurred according to definite phonetic laws. Fortunately also we have definite indications from several sources about the ancient pronunciation of literary Chinese. For instance, Chinese script was carried over into Japan during the 3rd century A.D., and in Japan these Chinese words are pronounced as they used to be in China at that period.[2]

Chronologically Chinese (i.e. the literary language) might be divided into four periods:

1. The Archaic period from the earliest times (about 3000 B.C.) up to the 6th century B.C.
2. The Old Chinese period from the 6th century B.C. up to the 10th century A.D.
3. The Middle Chinese period from the 10th to the 13th century A.D.
4. Modern Chinese period from the 13th century onwards.

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[1] Japanese and other foreigners, if unable to *speak* Chinese, can make themselves understood in China by *writing* down their thoughts.

[2] So it has been remarked by someone that if Confucius came back to life and talked as he did in his own lifetime, he would be better understood in Japan than in his own native province.

The "Classics" of China all belong to the Archaic period.

The most important dialect of China is the literary or standard dialect—*Kuan-hua* (the language of the official)—better known in the West as the Mandarin. All educated Chinamen know this speech and all official work is carried on in it. The dialect of Peking (modern Peiping) is now regarded as the basis of Mandarin, but before 1424 A.D., when Nanking was the capital, Mandarin was based on the Southern dialect.[1]

But we must clearly understand that Mandarin is the common standard dialect of the *educated* Chinese people. In modern days the vernaculars are also coming to the front as literary languages. So there are two varieties of literary language in China today: 1. "The higher style" or "older" language and 2. "The lower style" (vulgar) or "newer" languages.[2] The difference between the two is profound, covering not merely the choice of words but also idiom, construction and syntax. The "older" style clings to the model set by the "Classics". This style is terse, stilted and full of allusions not understandable except with a commentary. The "newer" style is distinctly easier and it seems that it has come to stay. A great lot of modern literature, novels, essays, poetry, drama, etc. is being written in this modern style. Modern newspapers also help this tendency. But it is in sharp contrast to the "classical" style and is inspired by the modern spirit of revolution

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[1] Giles, op. cit., p. 8.

[2] Much as Sanskrit and Prakrit were in the Middle Indian period.

§254. *The Semitic family:*[1] *its position among the language families of the world*

This is the best developed and the best known family of languages after the Indo-European. Its monuments go back to a very remote antiquity and in the ancient days this family was the most important of the linguistic families of the world, because the people with the greatest political power in those days were the speakers of Semitic languages. Though not possessing any longer the predominant political importance of ancient days this family is even today second only to the Indo-European family of languages. The various Semitic languages have developed religious literatures of profound significance in the history of the world. Another important respect in which the Semitic languages have been of importance is that these languages have given the alphabet and the art of writing to most of the peoples of the world to-day.[2]

(*i*) *Semitic and Hamitic*

This family is most closely related to the Hamitic;[3] so much so that some philologists are distinctly of opinion that these two families form "one linguistic unity". "It seems, indeed", says O'Leary, "that the Semitic group is but one member of a much larger Hamitic family"[4]. The most characteristic features of Semitic languages—viz., trilateral roots—is undoubtedly absent in the Hamitic, but a long separation and the influence of foreign idiom might conceivably have broken down the structure of the Hamitic languages.[1] But the points of resemblance are so close that even though few in number they are 'unusually significant".[2] These points of contact might be enumerated thus:

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[1] See Tucker, op. cit., pp. 158-172, also O'Leary. *Comparative Grammar of the Semitic Languages*, pp 1-23.

[2] China and India are the only countries of the old world at present whose alphabets are of indigenous growth.

[3] See § 240 above.

[4] Op. cit., p. 5.

1. The tense system of both families is based upon the fundamental difference of completed and incomplete action. The time idea is secondary.[3]
2. The plural suffixes of nouns in both families are probably of common origin.
3. The *-t* used as a sign of the feminine is also characteristic of both.
4. The possession of "grammatical gender" is common to both.
5. The pronouns in both the families are beyond all doubt identical in origin.

These points, though only five in number, are of great importance, the last point particularly might be considered as almost conclusive. Pronouns form perhaps the most stable element in a language and they do not change appreciably even after a long interval in spite of a great deal of foreign influence.

(ii) *Semitic and Indo-European*

Between peoples speaking the Semitic and the Indo-European languages there has always existed very close and intimate cultural relationship throughout human history. Doubtless the mutual influences of the two types of languages on each other have been very deep and lasting. But how far these two types have materially affected each other's structure has not yet been definitely made out. There are certain resemblances of detail which are, indeed, remarkably striking, but these might well have been only borrowings on one side or the other. There is also another explanation possible of these resemblances, viz. that both these types had a common ancestor. But if this were the case, that common ancestor must be put long anterior to any historical records. The whole subject is exceedingly interesting but very complex and no definite attempt had been made towards solving it until quite recently.[1] We may however mention that the meeting place of the Semitic and Indo-European peoples at the "dawn of history" was chiefly in Mesopotamia and also somewhat further West.[2] Three languages of great interest to students of linguistics show what the results of a mingling of these two types might produce. These are in chronological order, (1) the languages of the Hittites as deciphered from the Boghaz-küei inscriptions, (2) Pahlavi which was developed in Iran during the first six centuries of the Christian era and (3) Urdu which was admittedly a hybrid produced under the stress of the Islamic invaders of India. The last-named shows the Semitic influence chiefly in the very large percentage of purely Semitic words used. In Pahlavi, though essentially it is an Indo-European language, the proportion of the Semitic element is so large that for a long time it was classed as a Semitic language.[3] About the language of the Hittites a controversy raged in the beginning as to whether it is a Semitic language largely influenced by Indo-European or an Indo-European language largely modified by Semitic.[1]

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[1] Probably the same kind of complete break-up of grammatical structure has occurred in the Polynesian family as compared to the Malayan; see § 282 (pp. 838-840).

Tucker, op. cit., p. 160.

[3] See § 240 ii (pp. 857-858).

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[1] See p. 68, ftn. 1.

[2] E.g. in the empire of the Hittites.

[3] See Haug, *Essay on Pahlavi*.

The main points of contrast between the Semitic and the Indo-European languages are:

1. The trilateral roots of Semitic are unknown in Indo-European.

2. The flexion in Semitic is mainly internal, whereas in Indo-European it is by suffixes only.

3. There are no true compounds in Semitic. The only compounds allowed in Semitic are of the nature of the षष्ठीतत्पुरुष—i.e. "juxtaposition of two nouns", one being "governed" by the other, or standing to it in the relation of genitive.[2]

4. *Prefixes* are largely employed in Semitic languages to form derivative conjugations such as causals, reflexives, etc. But in the Indo-European no *grammatical* form is built up with a prefix.

§ 255. *Chief characteristics of Semitic languages:*
(i) Trilateral roots

The most striking features of Semitic languages is that the "root", or the ultimate form from which all others are derivable, consists of *three consonants* which remain unvarying throughout the whole series of derived words.[3]

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[1] Prof. Sayce strongly favoured the first view, whereas Prof. Hrozny, who had worked long at these inscriptions, strongly supported the second view. See "The Decipherment of the Hittite Language" by S. J. Crawford, *JRAS.*, 1919.

[2] Tucker, op. cit., p. 163. These compounds are mostly proper nouns like *Ben-Jamin*, *Beth-Shemesh*. It may also be noted that in such compounds the word-order in Semitic is exactly the reverse of that in Indo-European. The two examples given may be translated in यमिन-पुत्रः and सूर्य-भवनम् (*Shemesh* = सूर्य).

[3] See, for instance, the table of 70 derived forms from Arabic given by H. A. Salmoné, in his *Arabic Dictionary*.

The fundamental idea conveyed by the root is represented by its three consonants.

(*ii*) *Internal flexion*

But merely a group of three consonants would be unpronounceable; vowels must be used in order that roots like *qtl*, *ktb*, *nsr*, etc., might be uttered at all. And the whole structure of Semitic syntax depends on what vowels are used to help in the pronunciation of these roots. These vowels, in fact, constitute the essential morphological machinery of these languages and they vary in quantity, quality, position and number. To put the same thing in other words, the Semitic flexion is mainly *internal.*[1] And this internal vowel change is supplemented by the addition to prefixes and suffixes.[2] All derived nominal and adjectival forms are also built up in the same manner. The nearest parallels in the I.-E. languages to this internal flexion of the Semitic are the Ablaut and Vowel-gradation.[3] But in the Semitic languages the vowel change is different in its very nature. In the I.E. languages, it is by no means systematically used nor is there any *grammatical* signification attached to this change. The I.-E. Ablaut is essentially a phenomenon resulting from the shifting of the accent and as such it concerns the phonology of this family, *not* the syntax, as is the case with the Semitic family.

(*iii*) *The use of prefixes and suffixes to supplement internal flexion*

As mentioned above the internal flexion is supplemented by the use on prefixes and suffixes. The use of prefixes as a part of the syntactical machinery is also a distinguishing characteristic of these languages. The most notable use of the prefix is for the formation of derived conjugations. In Arabic there are no less than fifteen such derived conjugations.[1] Thus from the root **ktb**, to write we get *á**kt**a**b**a*, he caused to write (*i.e.* he dictated); *ta**k**ā**t**a**b**a*, he mutually corresponded; *in**k**a**t**a**b**a*, it was written; *i**kt**a**t**a**b**a*, he wrote from dictation; *ista**kt**a**b**a*, he asked some one to write; and so on. In the verbal tenses the completed action (the "perfect") is denoted by a suffix, whereas a prefix denotes an incomplete action (imperfect or continuous). Thus, **katab**-*at*, she wrote, but *ta*-**ktubu**, she writes; so also **katab**-*nā*, we wrote, but *na*-**ktubu**, we write.

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[1] See the example from the root *qtl* given in chap. II, § 24 (*i*).

[2] See below sub-section (*ii*).

[3] The गुण, वृद्धि and सम्प्रसारण of Sanskrit. Sae Chap. VIII above.

(*iv*) *Grammatical gender*

The possession of grammatical gender as opposed to natural gender is shared by this family in common with the Hamitic and Indo-European families. This is regarded by many as an argument in favour of postulating an ultimate common ancestor for all these three families. In this connection mention may also be made of the feminine suffix -*t*, which is also found in Hamitic.[2]

(*v*) *Case relations expressed only by three suffixes*

There are only three cases clearly distinguished by suffixes. The use of particles in primitive Semitic had to a certain extent prevented the formation of many cases by means of suffixes. The three cases are nominative, accusative and genitive, though the uses of the latter two are not the same as those of the Indo-European accusative and genitive. In fact these two oblique cases cover not merely the ground of all the oblique cases of the Indo-European but are also used to express adverbial and adjectival relations as well.

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[1] Also called "voices" in some grammars.

[2] § 240 (*iii*) above.

(vi) *The amalgamation of possessive and objective pronouns*

Possessive pronouns are suffixed at the end of the noun "possessed", e.g., Arabic *katab*-**ī**, my book; Hebrew *El*-**ī**, my God. This device has been adopted into *Irānī* also. So also the direct object of a verb if a pronoun is also suffixed to the verb, e.g., Arabic *daraba*-**ni**, he struck me.[1]

(vii) *Absence of true compounds*

This has already been considered above as one of the main points of difference between the Semitic and the Indo-European.[2]

(viii) *Use of particles and the consequent development of the analytical type in modern Semitic*

The case suffixes were, from early times, supplemented by the use of particles to indicate, or rather to emphasise and to make clearer relations of words in a sentence. In course of time, by regular phonetic decay (as happens in every language) the suffixes tended to be obliterated and were largely replaced by these particles. Thus in course of time the languages became more and more analytic. The most marked advance in this direction is to be noted in Modern Hebrew.

(ix) *The differences between the languages of this family are much smaller than in any other family*

The essential feature of the Semitic family, viz., that in each word the consonants supply the idea and the vowels the syntax, has led to a remarkable stability in these languages. The various languages of this remarkable family "stand to each other...in the relation of accentuated dialects."[1] Practically the only differences between these languages are phonetic. And even if a language is considered historically, we find that the differences at various stages of growth are chiefly due to the phonetic decay of affixes and an increased use of particles, in other words, the differences are mainly due to a growth from synthesis to analysis. The simplicity and regularity of primitive Semitic grammar is responsible for this state of homogeneity in this family. There was no great wealth of form in the primitive speech, so that each language as it branched off had to choose its own forms from among a limited number. Neither was the structure of this type in itself such as could admit of any considerable variation.

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[1] Root *drb*, to strike.

[2] § 254 above.

§ 256. *Divisions of the Semitic Family.*

These are shown in Table XLVI.[2]

There are five main groups as can be seen in Table XLVI: Akkadian, Canaanite, Aramaic, Arabic and Abyssinian.[3] The interrelations of these five are so close that it is not possible to arrange them in any groups except geographically as in the Table. Nor can we point to any one of these five as approaching the "parent language." Still, to some extent, Arabic seems to represent the purest Semitic because the least affected by alien elements, but frequently "we find in the Hebrew and Assyrian forms

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[1] Tucker, *op. cit.*, p. 165.

[2] The Table is based on Kieckers and O'Leary.

[3] I use this name following O'Leary to distinguish this branch from the Hamitic Ethiopian or Kushite.

Ancient Languages — **Modern Languages**

Semitic Languages

- Akkadian—Babylonian-Assyrian
- Canaanite
  - Canaanite
  - Phoenician—Punic
  - Moabite
  - Old Hebrew—Literary Hebrew (Hakmîm) — Modern Hebrew
- Aramaic
  - West Aramaic
    - Old Aramaic
    - Biblical Aramaic
    - Palmyrene
    - Nabatean
    - Palestinian
      - Galilean
      - Jewish Aramaic — Modern Aramaic (Ma'lûla)
      - Samaritan
  - East Aramaic
    - Palestine dialect (Syriac)
    - Babylonian Talmudic
    - Mandean
    - Modern Syriac
      - Torane
      - Urumia dialects
      - Fellahi dialects
- Arabic
  - Northern—Old Arabic
    - Hijaz—Classical Arabic—Modern Arabic
      - Hijaz
      - Iraqi
      - Syrian
      - Egyptian
        - Lower
        - Upper
        - Bedawi
        - Sinai
      - North African
        - Tripolian
        - Tunisian
        - Algerian
        - Maghrabi
        - Andalusian
        - Maltese
      - Hadramaut Oman
    - Nejd
  - Southern—Himyaritic
    - Miaean
    - Sabaean
    - ....Modern Himyaritic
      - Mehri
      - Soqotra
- Abyssinian
  - Ge'ez
  - ?
  - ....Modern Abyssinian
    - Tigré
    - Tigrañe
    - Amharic
    - Guragi
    - Harrâri

TABLE XLVI.—SEMITIC LANGUAGES.

(Facing § 256)

in full vigour which have disappeared from, but left their traces in Arabic."[1]

Arabia seems to have been the centre from which these languages radiated outwards. But it is possible that this Arabian group itself had been derived from a Hamitic source in Africa or elsewhere. This much is certain that "Arabia was the locus in which the Semitic languages specialised in their distinctive characteristics so that on passing out from Arabia they already showed the features which we have to regard as distinctively Semitic."[2] The plateau of Central Arabia was in prehistoric ages a fertile land capable of supporting a large population. The growing desiccation of Arabia was probably the cause of successive migration waves into the fertile plains of the Euphrates and the Nile and into the pastures of Canaan which have been rightly described in the Bible as the "land flowing with milk and honey."

§ 257. *Akkadian.*

This name has been suggested by Kieckers instead of the more usual Babylonian-Assyrian because the Akkadians were the first Semitic people to settle down in the "fertile crescent" of Mesopotamia. These people were contemporaries of the Sumerians and later on replaced them in power. In their turn they were replaced by migratory tribes from Central Arabia who founded Babylon. These latter were again conquered by another wave of Semitic emigrants (from the same ancestral homeland), who went further north right up to the Taurus range and founded the city of Niniveh and the empire of Assyria.

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[1] O'Leary, *op. cit.*, p. 5.

[2] *Ibid.*, p. 6.

The oldest Semitic documents we possess are the inscriptions of Sargon I, the great conqueror (about 2800 B.C.). The reign of the great lawgiver Hammurabi (about 2100 B.C.) was the most flourishing period of Babylonian culture and literature. Later on the inscriptions became less numerous.

These Semitic Akkadians and the later Babylonians who conquered the Sumerians imposed their language upon the conquered, but at the same time they adopted the higher culture of the latter. The whole Empire of Babylon became Semitic in language by B.C. 2400. But still Sumerian continued as the official tongue in some cities like Nippur, Erech, Arad-Sin and Ram-Sin for four centuries longer. With the acceptance of the ancient culture the Babylonian Semites also absorbed a great deal of the Sumerian religious ideals and ritual. In fact the sacred texts of the Babylonian religion continued for a long time to be in Sumerian and the ritual, too, was largely conducted in the ancient language of Sumer. These Sumerian texts were accompanied by Babylonian translations and glosses. Indeed a good bit of our knowledge of the Sumerian language we owe to the ancient Babylonian scholars who critically edited these Sumerian texts and compiled glossaries of Sumerian words.

The Assyrians, who replaced the Babylonians in power spoke a language very little different from that of Babylon. The earliest Assyrian inscriptions are of the reign of Tiglath Pileser I (about 1100 B.C.). The reign of Assur-bani-pal (B.C. 668-626) is a period of great literary activity.

After the fall of Niniveh (B.C. 606) a revival of Babylonian culture took place and during the long reign of Nebuchadnazzar (B.C. 604-561) there was a careful collection made of all the ancient texts and they were carefully stored in the royal library.

Long after the conquest of Babylon by Kurush (B C. 532) the language of Babylon survived and was used by the Iranian Achaemenians even for their own inscriptions up to B.C. 400. Till the reign of Darius the Great Babylonian remained the language of trade and commerce. But Aramaic had already become a competitor for some time and it replaced Babylonian almost imperceptibly. Even in the days of Darius the Great the script of the Aramaeans was in common use,[1] because it was cursive and more convenient for daily use than the elaborate cuneiform syllabary.

§ *258. Canaanite.*

The marauding Semitic nomads of the Arabian plateau overflowed into the fertile land of Canaan and found a well established culture there. They soon stretched up to the Mediterranean and took up the culture of the older inhabitants.

The earliest Canaanite remains consist of the famous Tell-el Amarna letters (15th century B.C.) addressed to the Egyptian rulers Amenophis III and Amenophis IV by tributary chieftains in Palestine. Some think that this dialect was the direct parent of the Phoenician. The earliest Phoenician inscriptions belong to the 9th and the 10th centuries B.C., but the vast majority are of the 5th century. The Phoenicians (or the Philistines) were originally refugees from Crete who had adopted the Semitic language of Canaan. They were great traders and seafarers and they founded the very important state in North Africa—Carthage. The language of this Phoenician colony is known to us through numerous inscriptions and is called Punic. The language survived till well into the Christian era. St. Augustine (354-430 A.D.) who was a Carthaginian himself has made some statements about the Punic language of his days, comparing it with Hebrew. Punic seems to have been influenced by Hamitic languages and to have been considerably "broken up" as regards its grammatical forms.

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[1] This script was carried to the Panjab when the Iranians conquered it; and from this was born the Kharoṣṭhi script of ancient India.

Another ancient language of Canaan is the language of the famous inscription of King Mesha on the Moabite stone (about 930 B.C.). It contains some forms which are quite archaic and have been lost in the other groups.

Hebrew is undoubtedly the most important of the Canaanite languages. It was the language of the Semitic speaking settlers in Canaan, modified by the non-Semitic idiom of the earlier inhabitants. The composition of the Old Testament began, probably, as early as the 8th century B.C. Pure Classical Hebrew was written (and probably also spoken) till the days of Jeremiah (about 600 B.C.). The language before that period is remarkably uniform. The Babylonian exile made Hebrew definitely into a literary language, and the vernacular of the people left behind, tended more and more towards Aramaic until literary Hebrew, so tenaciously preserved, ceased to be intelligible to the people left behind in Palestine. After the Old Testament the Mishna is the most important religious text of the Jews. It was written down in the 2nd century A.D. The language represents a later stage of Classical Hebrew and is called *Hakmīm*, "the speech of the learned." In many Jewish homes today Hebrew is still zealously cultivated and it is still used as the literary language. But there has been a good deal of foreign admixture and modern Hebrew has advanced most towards the analytic stage of all the Semitic languages.[1]

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[1] A very queer development is Yiddish spoken by the Jews of Germany. It is really German mixed with Hebrew to such an extent hat it has become a distinct hybrid dialect.

The movement amongst the Jews, began since the end of the Great War, of going "back to Palestine" has started new dreams of a reunited Jewish nation and a rejuvenated Hebrew language. In Palestine, the University of Jerusalem has taken up the question of reviving Hebrew and making it an adequate medium for expressing modern thought.

§ *259. Aramaic.*

Canaanite (as represented by Hebrew) and Aramaic are so close together that they may be regarded as dialects of one parent tongue. Hence in the discussion of the different varieties of Aramaic it is difficult to ascertain their exact positions and relations, because Hebrew and Aramaic had been most intimately connected in Palestine during many centuries as literary languages. Aramaic was originally the dialect of those Semitic invaders of Palestine and Syria who had gone further north and had settled in the *Aram* or the highlands. In fact they had been the pre-Israelite immigrants who had been pressed northwards by the later comers.[1] The earliest Aramaic inscriptions are those of Zinjirli and Nerab found near Damascus and dated about the 6th century B.C. In the earlier period, when Phoenicia dominated, Aramaic was merely the dialect of the northern highlanders. But after the decline of Phoenicia the city of Carchemish became the centre of trade and Aramaic rose rapidly to be the language of political and commercial intercourse all over Western Asia and Egypt.

After Aramaic had become the common language of Western Asia considerable literary activity was observed amongst the Jews of Egypt. Numerous papyri of that period have been discovered. Several chapters of the Bible are also in this variety of Aramaic,[1] and for this reason it has been called Biblical Aramaic.

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[1] Much as the Pahaḍi languages in India were driven to the northern mountains by the pressure of later immigrations.

Palmyrene (3rd century B.C.) and Nabatean (1st century B.C.) are known from inscription which were actually written down by the Arabs. They spoke their own language, Arabic but for purposes of inscriptions used Aramaic.

At the time of Jesus Christ a variety of Aramaic was spoken as vernacular in Palestine and Galilee. Hebrew was confined to the learned. Christ himself spoke Aramaic, as can be seen from the actual words quoted in the Gospels.[2] This variety is known as Galilean. After the fall of Jerusalem the learned Hebrew was entirely replaced by Aramaic even in literature and it continued to be the chief language of Palestine until it was replaced by Arabic after the Arab conquest. Many Jewish works have been written in this speech and hence it has been named Jewish Aramaic.[3] The Jewish (or Jerusalem) *Talmud* of a later date is also in the same dialect.[4]

Another variety of Aramaic is called Samaritan but it is hard to place it exactly. It seems to have been "the vernacular speech of Israel corrupted by Aramaic elements". But it must also be remembered that Hebrew and Aramaic are so close to each other that it is hard "to decide what dialectical peculiarities to justify inclusion in one group or the other."[5] Some Samaritan literature is known to us including a translation of the Hebrew Pentateuch (4th century A.D.) and some later poetry of post-Islamic times.

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[1] These are, e.g., *Ezra*, iv and vii and *Daniel*, ii and vii.

[2] *Mark*, vii. 34; v. 41.

[3] One of these works is the Jewish *Torgum* (6th century A.D.) in a queer mixture of the two main dialects.

[4] This has to be distinguished from the Babylonian Talmud in the Eastern dialect.

[5] O'Leary, *op. cit.*, p. 14.

After the Arab conquest in the 7th century, West Aramaic almost died out, except in a few villages in the Lebanon. These dialects were living until the 16th and even the 17th century. Even today West Aramaic survives in one or two villages of Antilebanon, the Malūla.

While West Aramaic was used mainly for Jewish works, East Aramaic was utilised for Christian writings. This branch is known as Syriac, or sometimes as "Christian Aramaic."[1] It has developed several dialects. Of these Palestinian Syriac (or Syriac in the narrow sense) possesses an almost exclusively Christian literature. The earliest piece in this dialect is a manuscript preserved in the Vatican entitled "the Liturgy of the Nile." There are also other documents, because the language continued to be used for literature long after it had been replaced by Arabic as the mother tongue of the people. Syriac literature begins about the 2nd century A.D. and its vocabulary has been greatly influenced by Greek.

Owing to the persecution of Nestorian Christians by the Orthodox Greek Church at Byzantium the Nestorians spread eastwards into Irān and even beyond. Their language (East Syriac) is still spoken in Mesopotamia. Its three subdivisions are Torane, Urumia and Fellahi dialects. The last is spoken round about Mosul and it possesses some songs of a devotional nature composed in imitation of the earlier Syriac poems.

Another variety of Eastern Aramaic was used for the Babylonian Talmud and is known as the Babylonian

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[1] This name is a misnomer and is hence not used here. Although most of the writings in Syriac are Christian there are some important Jewish works also to be found in this language.

Aramaic. And yet another was that used by the Gnostics in Mesopotamia and known as Mandean. This dialect embodies a considerable literature which is free from any special religious bias whether Judaic, Christian or Islamic. Hence the language developed unhampered and in a natural way; it is therefore linguistically important. It shows the various tendencies in Aramaic being carried further.

§ *260. Arabic.*

This is the most important branch of the Semitic family. Being near "the centre of distribution of the Semitic languages and in all probability their area of specialisation", Arabic is the richest in Semitic forms and a knowledge of this language is essential for Semitic philology. When the Arabs spread over the whole of the civilised world, Arabic necessarily came into close contact with other languages and thus split up into various modern dialects. Arabia itself had had contact with other cultures as well, but this was mainly through other branches of the Semitic family. Thus Greek culture came to the Arabs through Syria and Iranian through Mesopotamia and Yemen, in all of which Semitic languages dominated. Hence, inspite of foreign cultural contacts, the *language* of Arabia was enabled to preserve its essential Semitic purity and richness, and was "less affected by alien influences than any other of the Semitic languages." The influence of the Qur'ān has also been very great in preserving the purity of the Arabic tongue.[1]

The main divisions of Ancient Arabic are into Northern and Southern, often called Classical Arabic and Himyaritic respectively. In the Northern dialect the earliest remains consist of a umber of inscriptions. The oldest of these is on a tomb of an early Arab chieftain found at En-Namāra near Damascus and dated A.D. 328. Another inscription (a trilingual one in Arabic, Syriac and Greek) has been discovered at Zabad near Aleppo, which has been assigned to A.D. 512.

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[1] See § 49 above.

Old Arab poetry dates from several centuries before the birth of Mohammad. On account of the annual gathering of all Arab tribes at Mecca and the bardic contests held there, Old Arabic poetry soon assumed a "national" character and the greatest honour an Arab poet could win was to have his poem installed in the sacred precincts of the Kaabā.[1] The speech of Mecca and the other important cities was the Hijaz dialect. It had come under the influence of foreign traders who thronged in Mecca, and even in the Prophet's day it was not pure.[2] The Nejd dialect of the hinterland nomads of the desert had always been noted for its purity. It represented the older form and was almost entirely free from foreign admixture.

Mohammad had been sent out amongst these desert nomads to be nursed while yet an infant, and there he learnt to speak the pure desert dialect. Throughout his life the speech of the Prophet was marked by the extreme purity of form and its wonderful directness of appeal. Thus the Qur'ān, emphatically the Prophet's own work, when accepted as a standard for all time, set the finest example for Classical Arabic. This great book has tended more than anything else to preserve the essential features of Semitic speech.[3]

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[1] Nicholson, *Literary History of the Arabs*, Chap. III.

[2] O'Leary, *op. cit.*, p. 18.

[3] The basis of the Qur'ān was the Hijaz dialect, but it is in a much purer form owing to the upbringing of the Prophet.

This twofold division of Arabic into the Hijaz and Nejd dialects exists even upto this day. Among the latter may be enumerated the numerous dialects of the nomadic tribes.

As Islam spread Arabic was carried into Iraq, Syria, Egypt and North Africa. In the early days the main centre of Islam in Iraq was at Kufa. The early Arabic grammarians were living near this centre and as examples of "vulgar speech" they have often quoted the speech of the lower classes at Kufa. Many of these peculiarities are found in the Arabic of Iraq even today. In the Iraq Arabic there has been a considerable admixture of Irānī and Turkish and in recent years from French and Urdu.[1]

In Syria, too, several dialects might be distinguished, especially in the larger cities like Damascus and Jerusalem. Borrowings from other languages (e.g., Turkish, and Greek) are found here also. But the dialect of the *fellahin* (the peasant) in the villages approximates very closely to that of Iraq. Both in Iraq and in Syria considerable literary activity has been going on recently.

Egyptian Arabic has been showing great literary activity during the last fifty years and the great University of Cairo has been the chief fostering centre of this. It has undoubtedly been the great centre of Arab tradition, learning and research during many centuries. Among the Egyptian dialects that of Sinai marks a sort of transition stage between the Syrian and Hijaz dialects on the one hand and the Egyptian dialects on the other.

The Arabic dialects of North Africa have been such influenced by Hamitic Berber or Libyan dialects hence they are markedly different from the Arabic of Syria and of Egypt. At an earlier stage in the development of North African Arabic one group passed on into Andalusia in Spain where it gave rise to a very great literature. The Spanish Arabs were the earliest teachers of Europe in arts and sciences and philosophy.

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[1] **As a result of the British mandate over Iraq after World War I a large number of Urdu-speaking officials and traders have settled in Iraq. In fact Urdu-speaking Indians had gone to Iraq as traders even before that.**

Maltese is essentially North African Arabic but it has been influenced by Syrian Arabic through the Arab settlers in Sicily. The vocabulary is largely Italian.

The dialects of Hadramaut and Oman though geographically in the south are essentially North Arabic in origin.

The Himyari[1] were an ancient ruling race of Arabia. In the south of Arabia there was a Minaean kingdom which is said to have commenced about 1250 B. C. Later in the 8th century B.C. came the Sabaean kingdom. The languages of both these are known through inscriptions dated the 4th and 3rd centuries B.C. Of the modern dialects Mehri has been strongly influenced by Somali. The other minor dialects of Himyaritic seem to form a transition group between Semitic and Hamitic.

§ *261. Abyssinian*

The Semites seem to have entered Abyssinia about the 4th century B.C. It was mainly through Sabaea that this emigration proceeded. "*A culture different from that of Mesopotamia passed through South Arabia into* Abyssinia", and this line of communication was not interrupted till after the rise of Islam.[2] In Abyssinia the Semites settled in the most fertile tracts inland and drove the original Hamites into the deserts between the fertile plateau and the sea. Abyssinia accepted Christianity about the 4th century A.D. through the Coptic church of Egypt and thus a great many Coptic and Greek words have come into the language. The various renderings of the Bible started Abyssinian literature. It is fairly copious in other directions also. The early literary dialect is Ge'ez which is no longer spoken since the 14th century, but is still used in Abyssinian liturgy. The modern spoken dialects are Tigré and Tigraña. Amharic is the standard literary dialect today. It has been the language of the ruling classes in Abyssinia since 1270 A.D. It has influenced every other dialect of Abyssinia. Amharic is widely different from every other Semitic language, because it seems to have been superposed upon an original Hamitic foundation.

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[1] The *Homērētai* of the Greeks.

[2] Abyssinia is essentially a Christian land.

§ 262. *Unclassified languages of Eurasia: Ancient*

In spite of all elaborate methods of classification adopted by philologists there are still many languages which defy proper classification. They show no striking affinity to each other nor to any known language family. Most of these "unclassified" languages are ancient and extinct and a few are modern. The ancient unclassified languages are: 1. Ancient Cretan (or Minoan), 2. Mohenjo-daro (or Indus Valley), 3. Sumerian, 4. Elamite (or Susian), 5. Khatti (sometimes called Proto-Khatti), 6. Mittani, 7. Kassite, 8. Vannic, 9. Karian, 10. Lydian, 11. Lykian, and 12. Etruscan.

1. Ancient Cretan (or Minoan) inscriptions are found in abundance. The writing seems to be partly alphabetic, partly syllabic. Some of these can be read in a fashion and their meaning made out more or less accurately. A few are in well-known scripts, like the Cypriote syllabary, and these have given us an idea of what the language was like. Nothing can yet be said for certain about the

language except that it is neither Indo-European nor Semitic. There are a number of apparent suffixes, but we cannot say more. The dialects of the speech were spoken well into historical times. From Egyptian documents we know that this language was known there by the name Keftiu. Some of the details mentioned seem to point to Philistine connections, while others point to Etruscan. All that can be done for the present is that we can get lists of Minoan words and their meanings.[1] Many of these have been borrowed freely by the later Greeks. From these lists we can form a very good idea of the culture of ancient Crete. "It is enough to permit us to imagine that the Cretan language was capable of expressing every subtlety of poetry and of satisfying the demands of literature and science . . . . , Cretan writing expressed a highly civilised language which shed its influence far and wide".[2]

2. The excavations at Mohenjo-daro have revealed a very high type of culture and the inscriptions found have been very numerous. Various people have made attempts to decipher these; but we have as yet found no definite solution of their real meaning. The writing seems to be partly heiroglyphic and partly alphabetic. It seems, judging from the very obvious resemblances with the Sumerian symbols, that the language might be connected with that of Sumer. Professor Dr. Suniti Kumar Chatterji of Calcutta has, in a very interesting article entitled "Recent Discoveries in Sindh and the Panjab",[3] tried to show the possible connections that might have existed between the cultures of the Indus valley, of Sumer and

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[1] Hesychius in his *Lexicon* has given a number of words from Cretan dialects with their meanings.

[2] *The Aegean Civilization* by G. Glotz, p. 388.

[3] *Indian Historical Quarterly*, March, 1925.

of Crete. He has also tried to bring out a possible connection with the Dravidians of South India. Since 1936 Father H. Heras of the St. Xavier's College, Bombay has been working on these inscriptions on the tentative hypothesis that the language is Dravidian,[1] and he has given a series of very interesting papers on the subject. At any rate the Indus valley culture and the inscriptions are non-Aryan; and bearing in mind the linguistic "island" of Brahui[2] it does not seem quite impossible that the Mohenjo-daro language might have had Dravidian affinities.

3. Sumerian inscriptions are among the oldest human documents discovered so far. Some of these have been dated as far back as B.C. 4000. They are written in a pictorial script which later on developed into cuneiform. The script of Sumer together with its religion and culture was assimilated by the Semitic Babylonians. Having accepted the ancient religion of Sumer the Babylonian conquerors regarded the language of these scriptures as sacred and so they studied it assiduously. We owe our knowledge of this ancient language to the ancient Babylonian scholars.[3] The Sumerian language is agglutinating. Prefixes are found for the derivation of nouns. There are only two "tenses" for verbs indicating complete and incomplete action. The language died out as common speech about B.C. 2000 but it continued to be used by the learned as a "sacred" tongue up to B.C. 300. There are two clearly marked dialects.

4. Elamite (or Susian) is known to us through a large number of inscriptions. The earliest of these is a group of bilingual (Elamite and Akkadian) inscriptions

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[1] The late Prof. Mark Collins of Madras also tried to show that Sumerian and Dravidian were connected.

[2] See § 179.

[3] See § 257, p. 406.

of about B.C. 2500. A second group of Elamite inscriptions belong to the period between the 16th and the 8th centuries B.C. And there is a third group of trilingual inscriptions (Old Persian, Babylonian and Elamite) of the Achaeminian kings of Irān. There are clear differences between these three groups indicating growth from stage to stage. It was the language of Elam (or Susiana).[1] Older scholars gave it the name "Medic" which was a misnomer. The language is suffix-agglutinating. The verbal conjugation is very complex and has not been quite satisfactorily worked out as yet.

5. Khatti (sometimes also called Proto-Khatti) was the language of the original inhabitants of Asia Minor who were later displaced by the Hittites. Ethnologically as well as linguistically these people were very different from the Hittites. The distinguishing characteristic of the language is that there are grammatical prefixes and not suffixes.

6. Mittani was the language of the kingdom of that name and is preserved to us in a single cuneiform inscription associated with the Tel-el-Amarna letters from King Dusharatta (about B.C. 1400) to the Egyptian king Amenophis III about certain questions of boundary and about the marriage of Dusharatta's daughter, Daduhipa (or Tadukhipa) with the king of Egypt. The structure of the language seems to be agglutinating. The Khurri speech found later on in Armenia seems to have been a variety of Mittani.

7. The Kassites come to the front in the history of Babylonia from the 17th century B.C. These people continued to be strong in their native Zagros mountains right up to the days of Alexander the Great. There is

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[1] Modern Luristan and Khuzistan.

only one small glossary of Kassite words with Semitic equivalents extant, and so we have no further information about the language of these interesting people.

8. Vannic is found in one or two cuneiform inscriptions of about the 9th or the 8th century B.C. These give only a few words and grammatical forms.

9. Karian is known from some four score short inscriptions of the 7th century B.C. These are in an early form of the Greek alphabet. Being very short not much information is available about the language itself.

10. Lydian is of the same age as the Karian and is known through the glossaries of classical writers and some inscriptions. Some of the flexions resemble those of Indo-European very closely, but we have not enough material to assert any definite relationship therefrom.

11. Lykian is known from inscriptions dating not earlier than the 1st century B.C. A few of these are bilingual (Greek and Lykian) and unfortunately they are in an extremely fragmentary condition. A few words and forms tempt one to imagine that the vocabulary is non-Indo-European while the grammar is Indo-European. The material at our command, however, is too scanty to allow any definite assertion.

12. Etruscan was at one time thought to be Indo-European because of certain close resemblances of words. But these might well have been mere borrowings. The Etruscans entered Italy about the 15th century B.C. The earliest inscriptions are dated about the 600 B.C. and most of the Etruscan inscriptions are of the age of Augustus (B.C. 30—A.D. 14) and several of these are bilingual (Latin and Etruscan). The most important document in Etruscan is the text on a mummy wrapping from Agram, which has not yet been satisfactorily explained. At any rate it has definitely proved that the

language is not Indo-European. Modern research tends to the opinion that Etruscan might have had affinities with the Austric language of Asia.

§ 263. *Unclassified languages of Eurasia: Modern.*

Among these we may consider the following: 1. Basque, 2. Japanese, 3. Korean, 4. Lati, 5. Andaman and 6. Burushaski.

1. Basque: Among the unclassified living languages the most remarkable is Basque which is confined to a small district in West Pyrennese. There are at least eight clear dialects. The language is agglutinating in the main but the verbal system is distinctly of the polysynthetic type. "In an organised system of classification Basque would come midway between the American families of languages and...Ugrian".[1] Some of the remarkable features of the speech are:

(*a*) The article is a postposition, e.g. *zaldi*, horse; *zaldi*-**a**, the horse.

(*b*) The proncuns show a superficial resemblance to the Semitic and Hamitic pronouns.

(*c*) Gender distinction is found in verbal forms only, but the strangest peculiarity is that the gender of the *person addressed* is to be taken into account; e.g. *eztakit* means "I do not know it", but if a woman is addressed, it becomes *eztaki* **na**-*t*, "I do not know it, O woman", while to a man one should say *eztaki*-**a**-*t*,[2] "I do not know it, O man". Not only this, but there is a form of respect *eztaki*-**zu**-*t*, "I do not know it, O respected one", and a "childish form", *eztaki*-**chu**-*t*, "I do not know it, O child".

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[1] *Encyclopaedia Britannica*, art "Basque".

[2] For *eztaki-ka-t*.

(*d*) The verbal system is very complex because it incorporates the subject pronoun as well as the direct and indirect objects, when pronominal. There are at least 24 distinct froms for each "verb". The "verb" itself, however, has no independent existence.

(*e*) The two tenses, present and imperfect, are distinguished by the position of the subject. In the former it is suffixed, in the latter it is prefixed; e.g., *daki*-**gu**, "we know it" **gi**-*naki*, "we knew it".[1] There are periphrastic or participle conjugations of later development under the influence of French and Spanish.

(*f*) Compounds are possible but in the "polysynthetic" manner, i.e., the words joined drop one or more syllables. Thus, *odei* (cloud) + *ots* (noise) gives *odots* (thunder), so also *belar* (forehead, or front) + *oin* (leg) gives *belaun* (knee, lit. "front of the leg").

(*g*) The vocabulary is poor and peculiar. Abstract ideas are almost completely lacking. In several cases the vocabulary reminds us of the speech of some of the most primitive peoples. Thus *arreba* "a man's sister" and *ahizpa* is "a woman's sister", but there is no word to express the idea of "sister".

(*h*) The syntax is quite simple the verb generally being at the end.

2. Japanese: The Japanese language is classed by many as one of the Altai family. It is certainly of the suffix-agglutinating type but the other characteristics are not so clearly marked. The language is a highly developed one, and there is a sharp distinction between the written and spoken language, and in the latter variety between the "noble" speech (that of the higher classes) and the vulgar speech.[2] The agglutination is also of a fairly

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[1] A similar distinction is found in Semitic, see § 256, iii, above.

[2] See § 77.

loose type, in many cases the suffix being written quite separately. Another peculiarity is the use of reduplication to express plurality. The phonology of Japanese, especially of the colloquial, is very peculiar and complicated. The influence of Chinese culture and Chinese language is clearly marked, and the Japanese have very extensively adopted the Chinese ideograms in their writing.

3. Korean had also been once classified as one of the Altai family. It is agglutinating but the connections with the Altai languages are not at all clear. There have been considerable influences from the neighbouring Mongol and Manchu languages, still the essential structure of Korean is very different and distinct. With the introduction of Buddhism (in A.D. 372) Chinese script and culture were introduced into the country. From that time Chinese became in fact the "official language" of Korea. It was not until 1442 that an alphabet, very cleverly adapted to the needs of the Korean language, was invented. It was based upon an Indian script. Modern Korean is written in this Korean script and a new literature is at present being produced.

4. Lati (or Latchi) is spoken by a few hundred people in the borders of Yunan and Tonking. It forms a "linguistic island" in the midst of Tibeto-Chinese languages and is utterly unconnected with any of them.

Karen, Man, Burushaski and Andaman languages have already been considered in the chapter on the languages of India.[1]

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[1] See § 201.

CHAPTER XIV

HISTORY OF LINGUISTIC STUDIES IN INDIA AND IN THE WEST

§ 264. *Linguistic Studies in the Vedic Age.*

Every literary and linguistic effort of the ancient races seems to have been inspired by religious motives. This is pre-eminently the case with India. Here we have from the earliest days a mass of sacred literature embodied in the Vedic hymns of which every syllable was carefully preserved. In the course of ages when the language of the Vedic hymns ceased to be spoken, attempts were made to understand the Vedic speech clearly and from that date begins the study of linguistic phenomena in India.. This was destined in later ages to produce the most complete grammar and the most exhaustive analysis of any language in the world.

(i) *The Pada-text.*

The first step was taken when the *Saṃhitā*-text of the Vedic hymns was reduced to the *Pada*-form. In this latter form each word is shown separately and each compound is analysed into its components. In order to achieve this rules of phonetic combination, rules about the accent system and rules for the formation of compounds, *Samāsa*, had to be clearly understood. This resolution of the *Saṃhitā* into the *Pada*-form was the first step in the analysis or *vyākaraṇa* of the Sanskrit speech. "The very name *vyākaraṇa* indicates the method pursued".[1]

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[1] Rapson, "In what degree was Sanskrit a spoken language ?" *JRAS.*, July, 1904.

(ii) *The Prātiśākhyas.*

After this analysis proceeded apace. We get in the *Prātiśākhyas* the first treatises on phonetics. The ostensible purpose of these treatises is to teach how to chant the Vedas, but they contain a lot of very valuable information regarding the language. The most valuable portions of these works are, (i) the classification of Sanskrit sounds and (ii) the *Gaṇas*, or lists of words which are in any way remarkable grammatically. The classification of Sanskrit sounds found here is substantially the same as is recognised today in Sanskrit grammars and it shows a high degree of scientific precession and analytical skill. It was the *Prātiśākhyas* that arranged the Sanskrit sounds in their perfectly natural and scientific order.

(iii) *Yāska's Nirukta.*

The next great landmark in the history of linguistic studies in India is the great etymologist Yāska.[1] He was by no means the first etymologist in India. The writers of the *Brāhmaṇas* were among the first to make an attempt to discover the meaning of some of the Vedic passages. But even at the early date the Vedic dialects had become obsolete and the *Brāhmaṇas* interpreted the *mantras* in a manner which fitted in with their own ceremonials and their own legends and myths. In consequence we get many fanciful explanations given which are felt to be wrong even by the most casual reader.[2] But

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[1] I have on purpose omitted the dates here, because Sanskrit chronology is still in a very unsettled condition. I would refer the curious student to special treatises dealing with the history of Sanskrit Literature for a discussion of the dates of the various works and authors mentioned here. They follwed each other in the order indicated here.

[2] Such, for example, is the phrase अपाप which the *Aitareya Brāhmaṇa* understands to be अ-पाप and explains accordingly, instead of अप-अप which it really is.

Yāska in his *Nirukta* is far more scientifically minded than any of his predecessors. His investigations in the field of the Vedic etymology are of great interest and even now of some value. And he has the rare virtue of freely acknowledging when he is not quite sure of the correctness of his results. For even in his days the Vedas were of such hoary antiquity that people thought them to be practically eternal. Yāska has not done much work in grammar as such, but he seems to have had more than an inkling of the fact that all words are ultimately to be traced to a limited number of roots.

(iv) *The Nighaṇṭus.*

With Yāska we might also mention the various *Nighaṇṭus.* These works are collections of rare and obscure Vedic words. There seem to have been a large number of these collections and Yāska seems to have made use of at least five such.[1]

§ *265. Pre-Pāṇinian grammarians; the Aindra School of grammarians.*

After the time of Yāska, who might be taken as marking the culmination of the linguistic studies of the Vedic age, we have a large number of grammarians mentioned, but in most cases their works are entirely lost to us. There are two names, Āpisali and Kāśakṛtsna mentioned as founders of grammatical schools and one of the later writers, Kaiyyaṭa, quotes certain passages from both of them, but that is all the information we have about them.[2] Then there was the *Aindra* school, which was as tradition says, supplanted by Pāṇini.[3] In the

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[1] Macdonell, *Sanskrit Literature,* p. 259, See also Keith, *A History of Sanskrit Literature,* pp. 422-436.

[2] Belvalkar, *Systems of Sanskrit Grammar,* § 8.

[3] The Chinese pilgrim Hiuen Tsang and the Tibetan Tārānāth bot mention this tradition; See Belvalkar, *op. cit.,* § 9

Aindra school the greatest name is that of Kātyāyana. The school took its name from the god Indra, who is mentioned in the *Taittirīya Saṃhitā* (vii. 4.7) as the first grammarian.[1] The Aindra school apparently had a very important share in the development of linguistic studies in South India and Tamil grammars have been considerably influenced by it.[2] It is, however, remarkable that no important work of the Pāṇinian school mentions the Aindra grammarians by name. This would seem to imply that the name Aindra was of a later date. But the terminology and the methods of this school are decidedly of a more primitive and less developed type than those of Pāṇini.[3] This would lead us to the conclusion that "the Aindra school is post-Pāṇiniya in date though pre-Pāṇinīya in substance". Possibly it may be no other than the Kātantra school.[4]

§ *266. Pāṇini.*

A long interval separates Yāska from Pāṇini, the greatest grammarian of India (one might almost say, of the world). His was indeed a master-mind and he struck out a path entirely original. The whole of his work depends on the *Śiva-sūtras* where the *pratyāhāras* (i.e., the terminology he is going to adopt) are set forth. It is these fourteen *sūtras* that mark him out to be entirely distinct from any of his predecessors. But though he introduced many new technical terms and practically a new method of analysis, he did not entirely break with the previous systems of grammar. He accepted many of the older terms. By his masterly analysis he arrived at the fundamental conception of roots—which are a set of monosyllabic constants, each a *concept*, and each expressing an action (क्रिया). He also shows by his three-fold division of parts of speech[1] that he recognised the fundamental principle that "the sentence is the unit of language". To this day Pāṇini remains the most thorough and the most nearly perfect analysis of any language in the world. Many have tried to imitate, but none have surpassed him. His influence upon the Sanskrit language has been wonderfully deep and lasting, and, except (in a far lesser degree) for Hemacandra, his has been the only instance of a grammarian, pure and simple, practically dictating what a language should be. Pāṇini has been exalted in India to a rank far above that of a mere human writer, as an equal of the great sages who uttered the sacred *mantras* of the Vedas.

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[1] Quoted by Belvalkar, *loc.cit.*

[2] For a full account of the Aindra School see Burnell, *Essay on the Aindra School of Sanskrit Grammarians* (Mangalore, 1875).

[3] It may be noted that we find many of the technical terms of Pāṇini even as early as in the works of Yāska.

[4] Belvalkar, *loc. cit.*

With all his great genius and his deep and intuitive grasp of the fundamentals of linguistic science, it seems a pity that Pāṇini did not care to study more closely the speech of other people, like the Iranians and the Greeks, who spoke kindred languages.[2] Pāṇini himself was a native of north-western India (Taxila) and so he must have come into contact with Iranians and Greeks. What is more surprising is that when Iranians and Greeks had established their rule over portions of India, and when the political and cultural empire of India had penetrated far beyond the limits of India, even then no

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[1] See Chapter IX.

[2] Indian grammarians had certainly noted the kinship between the various Aryan dialects of India. Pāṇini himself speaks of the various dialects, and Hemacandra has clearly differentiated the various Middle Indo-Aryan (Prakrit) dialects of his time.

Sanskrit grammarian thought of investigating any foreign language. "Not only did the Greeks look down upon the Indians as barbarians; the Indians in their turn would have as little as possible to do with the Greeks."[1] This spirit of racial pride and arrogant exclusiveness was the main reason why in spite of their splendid linguistic acumen our Sanskrit grammarians missed the opportunity of founding the science of Comparative Grammar.

§ 267. *The influence of Pāṇini on the subsequent growth of Sanskrit.*

The influence of Pāṇini's grammar upon Sanskrit was immense. It has been said that 'grammarians have absolutely no authority to prescribe what is 'right' or 'wrong' but can merely state what is the actual usage, and that they are good or bad grammarians as they report truthfully on this point."[2] But this dictum cannot be applied to Pāṇini. He has been, by the unanimous opinion of his successors, invested with that authority as far as Sanskrit is concerned. This has been due to two reasons. First of all the *Aṣṭādhyāyī* was undoubtedly the unique achievement of a great analysing mind, unparalleled in the history of human thought, and as such it deserved a unique method of recognition. In the second place the language, which was analysed by Pāṇini, had already, in his own days, acquired a peculiarly sacred character in the minds of the public. And thus a religious authority was, as it were, added to that of Pāṇini himself in determining what was 'right' or 'wrong' in Sanskrit. The inevitable result of this twofold sanctity attaching to the work was that since his days the process of death had begun for Sanskrit, although it took many generations, perhaps a few centuries, before it ceased completely to be used as a vernacular. Language is a human institution and just because of this it has to be thought of as *a living and growing* organism. It must be flexible enough to express every phase in the mentality of the people who use it. It must change with their change, it must grow with their growth and progress. Hence rigidity in any respect is inevitably fatal to the continued use of a language as the daily speech of the common people. What Pāṇini had intended to do was merely to analyse (वि-आ-कृ) the language as he found it in his own day. It is not to be disputed that in his time it was a language spoken by the common people.[1] It was his subsequent reputation, added to the sanctity of the literature embodied in the language, that gradually turned what had been a mere statement of fact into an unchangeable and rigid rule of "correct speech". The consequence was that Sanskrit got rigid at the very core and it "died," i.e., it ceased to be used as a *living* language by the common people to express their thoughts and emotions. Of course it has always been, and is even now, cultivated by the "learned" (the *śiṣṭas*) and it still serves as a medium of polite intercourse between them. But the life has gone out of it and there is a certain degree of artificiality, or rather a want of spontaneity, about its use in "classical" times, which contrasts rather sadly with the vigour of the Vedic speech.[2]

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[1] Holger Pedersen, *Linguistic Studies in the Nineteenth Century*, p. 17.

[2] H. C. Wyld, *Historical Study of the Mother Tongue*, p. 3,

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[1] Rapson, *op. cit.*

[2] "Sanskrit would become the spoken language of India if all editions of Pāṇini's grammar were drowned," says Govind Śāstri Pardeśi; and, he may have added, if every Paṇḍit who remembered Pāṇini's Grammar were exiled.

§268. *Sanskrit grammarians after Pāṇini belong mainly to the Pāṇinian School.*

The great fame of Pāṇini practically extinguished every other school of Sanskrit grammar in this country. In fact except a few names[1] (and these of minor importance) all the work done since in Sanskrit Grammar is based on Pāṇini, and even these exceptions accept, in a large measure, his methods and his nomenclature. In fact most of the work done since his time has been in the nature of commentaries on the *Aṣṭādhāyī*, or a re-arrangement of the contents of that work. Thus while Pāṇini is the very flower of grammatical studies which had begun with the *Pada*-text, he is the first and the greatest of a school of grammarians, which since his time has practically held the field undisputed. We may mention only a few important names here.

(i) *Kātyāyana.*

The first name is that of Kātyāyana. Tradition makes him, indeed, the senior of Pāṇini,[2] but little reliance can be placed on this. We must allow an interval of at least a few centuries between them. As we have already mentioned, Sanskrit was a living language when Pāṇini analysed it and it continued to be so for a considerable period afterwards. Indeed the effect of his grammar began to be apparent only some generations later,[3] for the inherent vitality of the language had carried it forward with the growth of the people. The language had changed as every living language must change. Hence, by the time of Kātyāyana it was found necessary to supplement Pāṇini, to correct him in places, and, in general, to re-edit the work to suit the changed conditions. He sets about amending Pāṇini and he takes only those *sūtras* which he thinks require such treatment. He does that in the *Vārttikas*, and whatever statement he makes, he always gives reasons for them. But in many cases he seems to have misunderstood Pāṇini.[1] He seems to have belonged to a different school (probably the Aindra) and Patañjali definitely calls him a southerner. In his work of criticism Kātyāyana had many predecessors whom he quotes. He was also succeeded by several others, most of whom are known to us only by name.

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[1] For details see Belvalkar, *op. cit*, §§ 10-41; also Keith, *op. cit.*, pp. 431-433.

[2] See Burnell. *op. cit.*

[3] Even as late as the time of Kālidāsa we find a vigour and a spontaneity in the language which can only be found in a living speech. The gradual approach of "death" due to rigidity is, however, quite apparent at that period.

(ii) *Patañjali.*

Patañjali is the greatest name among Sanskrit grammarians after Pāṇini. His great work was the *Mahābhāṣya*, which is in reality a defence of Pāṇini against the criticism of Kātyāyana and at the same time supplements of the former's work wherever he thought it necessary. He also attacks Kātyāyana's work rather severely. But the main importance of the *Mahābhāṣya* lies in the treatment of the principles of grammar enunciated there. This great work has been closely studied and has several very important commentaries written upon it.

§ 269. *Later works of the Pāṇini School.*

These three—Pāṇini, Kātyāyana and Patañjali—are the three sages (मुनित्रय) of the science of grammar. They represent the high-water mark of grammatical research in India. After Pātañjali the Pāṇinian school is chiefly represented by numerous commentaries and commentaries on these in their turn and so on to several degrees. We can have merely mention some of the important commentaries on the main work of Pāṇini.

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[1] As pointed out by Patañjali, see Belvalkar, *op. cit.* § 18.

(i) *Kāśikā-vṛtti of Jayāditya and Vāmana.*

The work known as *Vṛtti-sūtra* but popularly called the *Kāśikā* is the joint work of the two scholars Jayāditya of Kashmir and Vāmana. It is a running commentary on the *Aṣṭādhyāyī* in a very lucid style and furnished with numerous examples. Another notable feature of this work is the incidental information supplied regarding many writers, now entirely forgotten but doubtless well-known to and studied by the authors. The *Kāśikā* has several important commentaries attached to it.

(ii) *Pradīpa of Kaiyyaṭa.*

Kaiyyaṭa's *Pradīpa* on the *Mahābhāṣya* may be noted here as an important work. This work marks the end of an epoch in the history of Pāṇinian grammar. By this time Sanskrit had long become a "classic," i.e., practically a "dead" language and had ceased to be influenced by the popular idiom. Then again Moslem invasions had begun and during the chaos of five or six centuries which followed no great work could be produced. In fact we do not get any work of merit till the days of the Moghals, when, with the establishment of peace, education and learning began once again to flourish.

(iii) *Siddhāntakaumudī of Bhaṭṭojī Dīkṣita*

It was then found that the study of Sanskrit grammar when it was a living language must differ considerably in its methods and order from its study as a "dead" language used only by the learned few. Consequently it was found that the arrangement of the *Aṣṭādhyāyī* was unsuitable and there was a demand for re-arrangement of Pāṇini's *sūtras*.[1] Hence we get a series of works known as the *Kaumudīs*. The most famous of these is the *Siddhānta-kaumudī* of Bhaṭṭojī Dīkṣita. This is now almost universally used in India for the study of Pāṇini. Bhaṭṭojī himself wrote a commentary on his own work and there are a host of others by various writers.

(*iv*) *Paribhāṣenduśekhara of Nāgojī Bhaṭṭa.*

The *Paribhāṣās* of Pāṇini's grammar found a commentator in Nāgojī Bhaṭṭa in his work called the *Paribhāṣenduśekhara*. Nāgojī was a voluminous writer and he has written at least a dozen works on grammar besides several on Dharmaśāstra and other branches of learning. Nāgojī is practically the last great writer[2] on grammar of the Pāṇinian type. After him the study degenerates rapidly into a writing of easy text-books and "cribs" for the use of the average student.

§270. *The Philosophy of Speech treated by the Naiyāyikas of Nadia.*

One point, however, deserves mention. The rise of the logicians at Nadia gave an impetus to the study of the psychological aspect of language. The Nyāya philosophy definitely included *śabda* (or speech) as one of the means of knowledge and in the process of drawing inferences an accurate idea had to be obtained of the capabilities of language for that purpose. Hence there grew up a special section of a very abstruse branch of linguistics, partly semasiology and partly pure dialectics, which found great favour in Bengal. The best representative work of this school is the *Śabdaśaktiprakāśikā* of Jagadīśa Tarkālaṅkāra, a very modern work.[1] The book is an extremely abstruse treatise on the philosophical and psychological aspects of the Sanskrit language.

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[1] For details see Belvalkar, *op. cit.*, § 29.

[2] Prof. Berthold Liebich once told me that he claimed direct *śiṣya*-desent from Nāgojī. He himself was a pupil of Kielhorn, and Kielhorn was pupil of a Pandit who traced his "grammatical descent" v e may use this phrase) from Nāgojī.

§271. *Other Schools of Sanskrit Grammar*

It is not necessary here to go into details about the other Schools of Grammar in Sanskrit.[2] The more important of the surviving schools might, however, be mentioned here by name. They are all later than Patañjali, and some of the very minor ones are quite modern. The earliest is the Kātantra school which is, as mentioned already, thought by some to be the same as the Aindra school. The schools of Candragomin and Jainendra are definitely sectarian in their outlook. The school of Hemacandra and that of Bopadeva, however, deserve special mention.

§272. *Hemacandra*

Hemacandra was a very holy Jaina monk who had a considerable share in shaping the history of Gujarat. He was a man of great culture and of encyclopædic learning.

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[1] See Satis Chandra Vidyabhusana, *A History of Indian Logic.*

[2] The details are to be found in Belvalkar, *op. cit.* Also Colebrooke gives an account of various Sanskrit Grammarians in an essay printed among his *Miscellaneous Essays*, Vol. II.]

He has left many works on many subjects on each of which he has left a lasting impress. He also wrote a grammar, the *Śabdānuśāsana*, with the object of saying "in the shortest possible manner not only all that his predecessors had said upon the subject, but everything that could be said."[1] As a work on Sanskrit grammar it was a failure, partly because of the sectarian bias of the writer. But the last book (the fourth) of this grammar deals exclusively with the Prākrits of his day and that part constitutes his best claim to remembrance here. This Prākrit grammar of Hemacandra did for Jaina Prākrit, though on a limited scale, what Pāṇini's *Aṣṭādhyāyī* had done for Sanskrit. It made that language rigid, and the language (which even then was passing out of use as a vernacular), "died" as a result of Hemacandra's work. Moreover the reasons were the same as in the former case, *viz.*, (1) the great fame and religious sanctity of the author and (2) the sacred character of the literature embodied in that language.

§ *273. Bopadeva.*

The school founded by Bopadeva has found a permanent place in Bengal and his *Mugdhabodha* has been regarded as a standard work. This was really an attempt at simplifying the grammar of Pāṇini for the understanding of *Classical* Sanskrit. All Vedic peculiarities (including accentuation) are strictly avoided.[2] It was, moreover, a distinct attempt to represent the orthodox Brāhmanical point of view as opposed to the sectarian schools of the Jainas, the Bauddhas and other heterodox people. For this purpose he illustrates his rules with examples from Brāhmanical mythology and he "has taken care to use whenever possible the names of Hari, Hara and other gods" with equal impartiality. He has considerably simplified the system of Pāṇini and he had to deviate considerably from him in the use of technical terms.

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[1] Belvalkar, *op. cit.* § 58,

[2] The only reference to Veda is in the last sutra बहुलं ब्रह्मणि corresponding to Pāṇini's बहुलं छन्दसि ; see Belvalkar, *op. cit.*, § 83.

§ 274. *Language studies in ancient Greece.*

So far we have been dealing with the indigenous grammarians of India entirely unaffected by any external influences. Before we can appreciate the modern tendencies of linguistic studies in India we must glance rapidly at the history of grammar in the west, for our modern tendencies are a direct outcome of Western influences.

Greece has always been regarded as the fountain-head of all Western culture, and though the study of grammar and language first commenced with a study of the Greek tongue, the Greeks themselves contributed nothing whatever to the formal study of any language, not even their own. They had a supreme contempt for any one not speaking Greek (which they regarded as the only tongue fit for the use of cultured beings) and they called all such foreign people *barbároi.*[1] As to their own language they thought that a man learnt his own mother-tongue naturally and that he had no need to be *specially taught* anything about it. They paid great attention, however, to the art of debate and to rhetoric and both these formed an essential part of their educational system. But language as such they never studied.

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[1] So great was this prejudice against any foreign-sounding speech that even the Macedonians, who spoke an outlying dialect of Greek itself, were included under the term.

§ 275. *Aristotle.*

The great philosophers of Greece had naturally something to say about language and Aristotle's work in this respect is remarkable for the deep insight he has shown in the analysis.[1] Aristotle's analysis is distinctly from the point of view of the philosopher and the logician. But his classification is of immense importance to us, because in the science of language, as in everything else, he was the first great exponent. His classification and his nomenclature is the one we still use in our grammars, though a good deal misunderstood, perverted and misapplied. For example the terms "subject", "predicate" and "copula" are taken directly from his formal logic. It is a pity that such has been the case, because, far from making matters clearer, this nomenclature vaguely understood, and even more vaguely applied, has been at the root of a great deal of confusion in our grammars.[2] It is somewhat unfortunate that in modern India we too have taken up these unscientific and vague "parts of speech" from Europe, although there is the much more accurate classification of Pāṇini into the three groups तिङन्त, सुबन्त and अव्यय.

§ 276. *Plato.*

Plato has incidentally dealt with language in his philosophical Dialogues. He has some pertinent remarks to offer on the relation of thought and speech. He says

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[1] He deals with this in the twentieth chapter of his *Poetics.*

[2] A sort of religious sanctity seems to have attached itself even to the number (eight) of the "parts of speech", and any one suggesting any other style of classification was, not so very long ago, regarded almost as a heretic. The same overlapping of logic and grammar and the same resulting confusion is to be observed in the linguistic speculations of the Nadia logicians of Bengal (see above § 270).

- Letters
  - Voiced (phōnḗenta, vowels)
  - Voiceless (áphōna)
    - Voiceless (but not soundless) (hēmíphōna, semi-vowels)
    - True mutes (áphthonga)

Table XLVII.—Plato's classification of Greek sounds.

(Facing § 276).

in the *Sophist*, "thought (*didnonia*) is the same as language, with this exception, that thought is the conversation of the soul with herself which takes place without voices, while the stream which, accompanied by sound, flows from thought through the lips, is called language (*lógos*)". He repeats this belief in the identity of thought and language in the *Theaetetus* (190), where he says, "to form an opinion is to speak, and opinion is a word spoken, I mean, to oneself and in silence, not aloud, or to another". In his *Cratylus* he analyses the Greek sounds phonetically.

Plato's classification was extended by later grammarians of the Greek language by dividing the true mutes into (*a*) *psilá* (voiceless), (*b*) *mésa* (voiced) and (*c*) *daséa* (aspirate). This is the phonetic classification which was followed by Europe till very lately. It is shown in Table XLVII.

§277. *Early Eruopean Grammarians.*

The first grammar ever written in Europe was by Dionysios Thrax (2nd cent. B.C.), a Greek who wrote it in order to instruct his Roman pupils in his own mother-tongue. He based his analysis upon the Aristotelian system, and his method is essentially the same as is still used in Europe. His successor Appolonius Dyskolos is notable chiefly for his systematic treatment of syntax. Following these two writers and taking them as models the Romans, in their turn, started analysing their own language and a number of Latin grammars were written. The Romans too, like their teachers the Greeks, paid special attention to oratory and rhetoric and for them the great Greek writers were the models. And long after the Roman Empire in the West had fallen before the Goths the study of both these classical languages continued to be pursued. The Latin grammar of Laurentius Valla (1440) was a great authority even up to the 18th century. It was completely Aristotelian in spirit and in nomenclature.

"The ancient world bequeathed to Europe a legacy heavy with misunderstanding of the history of language: and European Linguistic science continued to labour under it until the range of Linguistic knowledge had been extended beyond the dreams of the ancients".[1]

§ 278. *Christianity and the Crusades*

But the chief event in Europe during the centuries succeeding the fall of Rome is the growth of Christianity. The study of Christian scriptures was the principal incentive to all intellectual work during that period, and various languages were studied in order to elucidate the sacred books of that faith. Thus both Hebrew and Greek were cultivated. Closely associated with these were the various other languages, Syriac for certain special versions of the scriptures, and Latin for the writings of the great Christian theologians of this age, for Latin was at that period the universal language of the learned. Arabic also was studied early, partly in connection with Hebrew, and partly as a result of the Crusades and partly in order to enable them to study at the Arab universities of Spain. The net result of the study of all these languages was that scholars began to realise very early that Latin and Greek were very closely related.[2] Arabic, Syriac and Hebrew also were observed to form an even more closely related group. And the study of this latter group led directly to theory of roots being the ultimate foundations of language. But while Christianity gave such a great impetus to the study of foreign languages, the orthodox theology of the church was responsible for some very wrong notions, which crop up occasionally even now. Thus, for example, it was always thought that Hebrew was the "mother" of all languages and many ingenious but wholly unscientific, proofs were given to derive Latin and Greek words through Hebrew.[1]

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[1] Holger Pederson, *Linguistic Studies in the Nineteenth Century*, (Harvard, 1931), p. 4.

[2] This fact was certainly recognised by the Romans also. It is a pity that Sanskrit Grammarians did not come into closer touch with other people speaking a kindred language. The Iranians and Greeks

§ 279. *Early European Orientalists*

Ever since the days of the Crusades active interest was being taken by the learned people of Europe in Arabic learning. "The first translations from Arabic into European languages were made about the beginning of the twelfth century of our era by Jews or Moors converted to Christianity".[2] Soon after learned Europeans took to

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were in India a comparatively short while, and they were succeeded by a long series of foreign and barbarian invaders. Pāṇini, himself a native of north-west India, certainly knew about the Greeks and their language. But he never compared their speech with his own. This probably is the reason why the closeness of other languages to Sanskrit was never recognised by Indian writers. The nearness of the various Prakrits and of the various Vernaculars has been noted by Hemacandra and other writers on Prakrit.

[1] Exactly the same sort of attempt is often made by some Indian writers to make Sanskrit the "mother", not only of the Indo-European, but of *all* languages. Thus I have read in a serious essay about the derivation of the Arabic word *kitāb* from पुस्तक. The Arabs read from right to left hence they read the Sanskrit word as कत्सपु from whence (discarding all vowels) we get क-त-प and *kitāb* !

[2] Browne, *Literary History of Persia*, vol. i, chap. ii. The other quotations given here are also from the same source.

the study of Arabic by itself. They went to the Arab universities in Spain[1] and studied the works of the great Arab philosophers like al-Fārābī, Ibn Sīnā (Avicenna), Ibn Rushd (Averroes), al-Ghazzālī and others. Among such scholars might be mentioned Albertus Magnus (1193-1280), Michael Scot (1214-1291) and Roger Bacon. The last named specially "called attention to the importance for philosophic and scientific purposes of a study of Oriental Languages". The Pope ordered (1311) the establishment of chairs of Hebrew, Chaldean (Syriac) and Arabic at the greater universities in Europe, but in order to prevent heresy he put these studies under the direct control of the church. "The first Orientalist of Europe" in the present sense of the word, was Guillaume Postel (died 1581), who first cast Arabic types and was the first to use them in his books.

"The full development of oriental studies in Europe, however, may be said to date from the seventeenth century, since which epoch progress has been steady, and continuous". Professorships in Arabic were established in Cambridge (1632) and at Oxford (1636). Among the earlier pupils of Abraham Wheelock, the first Professor of Arabic at Cambridge, was Thomas Hyde (1636-1703) author of the well-known Latin work on the "History of the Religions of Ancient Persians, Parthians and Medes" (1700). Hyde made use of several earlier works among them a small tract by Henry Lord on "the Religion of the Parsees" (1630) based upon information gathered by the author from the Parsi priests of Surat.

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[1] Joseph McCabe, *The Splendour of Moorish Spain*, chap. xviii.

§ 280. *The founding of Iranian studies in Europe*

In 1794 "a facsimile of four leaves of the Bodelian mss. of the Vendidād"[1] fell into the hands of a young Frenchman, Anquetil du Perron (1731-1805), and he with an impulsiveness and devotion to science truly Gallic, at once resolved "to win for his country the glory of wresting from the suspicious priesthood who guarded them the keys to these hidden secrets of an old world faith, and of laying before the learned world a complete account of the Zoroastrian doctrines, based not on the statements of non-Zoroastrian or even modern Pārsī writers, but on the actual testimony of the ancient Scriptures themselves". So burning was his zeal that he immediately enlisted as a private soldier in the army of the French East India Company. Immediately on his arrival in India he began to learn Persian and after great hardships reached Surat and placed himself under the guidance of the Parsi priests there. After seven years and a half of incessant labour he did learn what he had set his heart upon. He returned to Paris in 1762, and after nine more years of labour he published in 1771 his epoch-making work *Le Zend-Avesta, ouvrage de Zoroastre, traduit en Français sur l'original Zend,* in three volumes. As Anquetil himself had anticipated the work was received with scepticism, and even ridicule, by the learned world. He had put down all that he had been taught by the priest at Surat, and this did not agree with the views that the learned world held about "the great sage of ancient days, Zoroaster". The most vehement critic of Anquetil was Sir William Jones, who in a letter in French "not only overwhelmed Anquetil with satire and invective which are not always in the best taste, but absolutely refused to recongnise the immense importance, and even the reality of discoveries which might have condoned far more serious shortcomings. As Darmesteter happily puts it, 'the Zend-Avesta suffered for the faults of its introducer, Zoroaster for Anquetil'." Indeed, one of the reasons which led Sir William Jones later on to found the Royal Asiatic Society was to ensure the study of Oriental languages and religions in a manner different from that followed by Anquetil.[1]

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[1] These had been brought to England in 1633 and 1733.

§ 281. *Early Indian Studies in Europe*

While Arabic and Islamic studies were being carried on in Europe ever since the days of the Crusades, the Indian side was known but vaguely and through wonderful tales of "Indian Wisdom". But since the discovery of the sea-route to India by Vasco de Gama Christian missionaries had started studying the languages and the religious beliefs of India. It was primarily through these Christian priests, mainly Jesuits, that knowledge of Indian languages and of Indian culture began to spread in Europe. One of the earliest of these was Abraham Rogers, who was chaplain at Pulicat from 1631 to 1641, and who translated Bhartṛhari into Dutch in 1651. Somewhat later the *Lore of the Ezour Vedam* was greeted enthusiastically by Voltaire.[2] Unfortunately this last mentioned work was proved to be a forgery by a Jesuit priest and consequently for many years afterwards the Sanskrit language itself was regarded as "a forgery made by the *crafty Brahmans on the model of* Greek after Alexander's conquest".

[1] I mention this on the authority of the late Dr. Sir J. J. Modi.

[2] Macdonell, *Sanskrit Literature*, chap. 1.

The missionaries worked on the Indian vernaculars of the South and produced translations of various parts of the Bible in Tamil and in Konkanī. A Konkani Grammar was also compiled by one of these missionaries. The important center for missionaries in South India was at Tinnivally, where Schwarz worked during the eighteenth century. The other missionary center in India was founded in 1794 by William Carey at Serampore in Bengal. The main object of this mission was educational, but the East India Company looked upon this effort to educate Indians as dangerous and risky to their rule. Hence Carey chose the Danish settlement of Serampore as "a safe refuge".[1] Carey became Professor of Bengali, Marāṭhī and Sanskṛt at the Fort William College in 1801. It was also at Serampore that the first newspaper in an Indian Vernacular, the Bengali *Samāchār Darpaṇ*, was started in 1822; and this helped very considerably the moulding of modern Bengali prose.

The practical need felt by the officers of the East India Company for understanding the Hindu as well as the Islamic codes of law led to the establishment of colleges for teaching these subjects at Fort William. Already in 1778 Warren Hastings had summoned eleven learned Brāhmaṇas of Calcutta and had directed them to compile a text of all the Hindu laws and customs so that these might be rendered into Persian and used in the Company's courts. "And he appointed Hindu and Muhammadan advisors to the European judges to expound the laws and customs of the people". This constituted "the first movement for an intellectual understanding of the literature of India by the Company".[2]

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[1] R. W. Frazer, *A Literary History of India*, p. 390.

[2] *Papers relating to Indian Affairs* (1832), quoted by Frazer, *op. cit.*, p. 389. f.n. 1.

The Hindu Law, as codified with the help of the eleven Brāhmaṇas, was made known to English judges only in a *translation*. The original language of these laws had as yet remained a sealed book. In 1785 a young English merchant, Charles Wilkins, translated the *Bhagavad-Gītā* into English and in 1787 he published a translation of the *Hitopadēśa*. Even then "the West woke not up to the fact that India possessed aught of more value than bales of calico and spices and gems".[1] In 1789 was published the translation of *Śakuntalā* by Sir William Jones and that showed conclusively to the West that India did possess a great literature. Humboldt gave to Kālidāsa "a lofty place among the poets of all ages," and Goethe sang of *Śakuntalā* in his oft-quoted lines.[2] A desire was now created amongst scholars of Europe to read all these wonderful books in the original language. And as soon as they learnt this language they could not help noticing the close similarity it bore to the "classical" languages of Greece and Rome. But they also saw it was distinguished by the very thing so lacking in Greek linguistics, the systematic and rational analysis of the forms of speech.[3]

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[1] Frazer, *op. cit.*, p. 5.

[2] These are (rendered into English):

"Wouldst thou the life's young blossoms and the fruits of its decline,
"And all by which the soul is pleased, enraptured, feasted, fed,—
"Wouldst thou the earth and heaven itself in one sweet name combine?
"I name thee, O Sakuntala, and all at once is said."

[3] Holger Pederson, *op, cit.*, p. 12.

§ 282. *The introduction of the study of Sanskrit into Europe*

But "Comparative Philology" as we now know it was not known to Europe until Sanskrit was introduced to the notice of European scholars. "Comparative Philology was born on the day when Sanskrit was opened to the eyes of the Western world. The enthusiasm that stirred the hearts of those first pioneers into the realm of India's sacred language and India's ancient lore still throbs in the veins of their followers to day and will quicken the pulse beat of inspired workers for generations to come"—such are the enthusiastic words in which Jackson has described the effect of the first view of Sanskrit by European scholars.[1] It opened out a new world, as it were, and for the first time the scholars of Europe realised that all the important languages of Europe as well as those of Iran and India were really members of one family. From this time onward "philology" as we know it to-day begins.

§ 283. *Laying the foundations in Europe*

(i) *Sir William Jones (1746-1794)*

The first foundations were laid by Sir William Jones in the year 1786, when at the foundation of the Royal Asiatic Society in Calcutta "for enquiring into the history, civil and natural, the antiquities, arts, sciences and literature of Asia" he definitely pointed out the main features of the new branch of knowledge opening out before the European world. He said:

"The Sanskrit language, whatever be its antiquity, is of wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either; yet bearing to both a stronger affinity, both in the roots of verbs and in the forms of grammar, than could have been produced by accident—so strong that no philologer could examine all three without believing them to have sprung from some common source, which perhaps no longer exists. There is a similar reason, though not quite so forcible, for supposing that both Gothic and Celtic, though blended with a different idiom, had the same origin with the Sanskrit".

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[1] A. V. W. Jackson, *Philology*, p. 9.

His translation of the *Sakuntalā* was a notable event in the world of European scholarship. It drew attention to the beauty and richness of Sanskrit literature and great poets like Goethe and Herder spoke of it with unstinted appreciation. He also published translations of *Gīta-Govinda* and of *Mānava-Dharmaśāstra*. He was "a man, of whom it is difficult to say which is most worthy of admiration, the splendour of his genius, the rareness of his acquirements, or the unspotted purity of his life".[1]

(ii) *Henry Thomas Colebrooke (1765-1837)*

The work which Jones inaugurated prospered and very swiftly grew into a definite science. One of the earliest Englishmen to take up the study was Henry Thomas Colebrooke, who has been perhaps the best among the English Sanskritists. He was a man of great learning and he has left his mark on almost every branch of Sanskritic research owing to the width and depth of his scholarship. Beginning with a violent prejudice against Oriental learning, which he compared to "a dunghill, in which a pearl or two lie hid", he grew to be a most ardent and zealous student of Sanskrit, Prakrit, Persian and Arabic, besides studying the plants and animals and geology of India. He took special interest in the Himalayas and the measurement of the heights of the peaks. His favourite topic was Hindu Astronomy and Mathematics and the kindred topic of Arabic Astronomy and Mathematics.[1]

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[1] This is the opinion of the American Justice Story.

(iii) *Friederich Schlegel (1772-1829)*

The greatest amount of work in the science of Philology, however, has been done in Germany. The story of the first German Sanskritist is a romance of the Napoleonic Wars. Friederich Schlegel was in Paris in the year 1803, where he made the acquaintance of a young British soldier, Alexander Hamilton, who had been made prisoner of war on his way home from India. Hamilton had made good use of his time in India by studying Sanskrit and though he never did any remarkable work as an Orientalist himself, he started the movement in Germany by teaching Sanskrit to Schlegel. It was the latter who first pointed out to German scholars the importance of Sanskrit to students of linguistics and he also pointed out the right direction for such a comparative study. In his famous book "On the Language and the Wisdom of the Indians" (1808) he has used the term "Comparative Grammar" for the first time. He remarks that "comparative grammar will give entirely new information on the genealogy of languages, in exactly the same manner in which comparative anatomy has thrown light on natural history".[2]

(iv) *Wilhelm von Humboldt (1767-1835)*

F. Schlegel was the first Sanskritist in Germany but the real founder of the science of Comparative Philology—in the sense that he first laid down the principles which have since completely guided and dominated these studies—was Wilhelm von Humboldt. A man of amazing versatility, he was above all a statesman and politician; but he found time to study languages and to write several works on the study of language. These works do not contain any remarkable discoveries in linguistics[1] but they show a remarkably broad outlook upon the subject and a very clear grasp of what such a science should become. His point of view is essentially historical and sane. He regards "philology" as a part of the wider study of mankind. Language, he maintains, is not a thing created or artificially made, but is an energy found in human beings, a manifestation of the Divine Life in man. He is very emphatic in the statement that the beginning and the end of all things are hidden from human eyes and hence we can contemplate only the stages in the middle.[2] Therefore, he holds, we need not trouble about the origin of speech and thus lose ourselves in the mazes of speculation. Let us take it for granted that man speaks because speech comes natural to him, sound links itself to his thoughts and as it were wells out from him. Humboldt also had the idea that words are traceable to roots and that inflections were originally independent words which were joined on to other words to modify their sense. Throughout his work there runs his great feeling of humanity.

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[1] From the obituary notice by his son, *JRAS*, vol. 5.

[2] Quoted by Pederson, *op. cit.*, p. 19.

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[1] Except perhaps his remarkable work on the Kawi (Javanese) language.

[2] Cf. अव्यक्तादीनि भूतानि व्यक्तमध्यानि भारत ।
अव्यक्तनिधनान्येव ।

Bhagavad-Gitā, II. 28.

(v) *Adolf Schlegel (1767-1845).*

He was the brother of F. Schlegel and was a great authority on Sanskrit, and he it was who gave out the extremely wise advice that the Sanskṛit literature ought to be studied with the reverence of the Brāhmaṇa and at the same time with the critical and scientific spirit of the European scholar.[1] He may be regarded as the founder of Sanskrit Philology in Europe.

(vi) *Franz Bopp (1791-1867).*

We must also mention here the first writer of Comparative Grammar, Franz Bopp. Though his work is now out of date, it has got a great deal of historical interest for us. In 1816 came his first work on *The Conjugation System of Sanskrit Verbs as compared to that of Greek, Latin, Persian and Germanic.* His greater work was published in 1838. It was the *Comparative Grammar of Sanskrit, Zend, Greek, Latin, Lithuanian, Gothic and German* and in 1854 he brought out as a supplement to his Comparative Grammar, *A Treatise on the Accent Systems in Sanskrit and Greek* Bopp believed that the inflections were originally independent words which were used to modify the other words to which they were attached and these gradually lost their independent existence and became mere meaningless suffixes. Of course being the first writer on Comparative Grammar Bopp had not enough material and he is by no means accurate. There were a lot of problems he could not solve, and so he laid down the dictum that "the laws of philology" were true only within certain limits.

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[1] *Indische Bibliothek*, I. 22, quoted by Delbrück in his *Studium der indogermanischen Sprachen*, p. 78.

(*vii*) *Jacob Grimm* (*1785-1863*).

Jacob Grimm, who so greatly delights all children with his incomparable Fairy Tales, was the first writer of Historical Grammar. His great *German Grammar* began to appear in the year 1819. He considered the subject solely from the historical point of view. He lays great stress on the regular growth of language with the progress and development of the people. His name is specially associated with the famous two "laws of sound-shifting", which he formulated for the Germanic languages. The further elucidation of these "laws" forms an important chapter in the history of linguistics.[1] Grimm clearly pointed out the true historical and scientific method of research, and his own unequalled knowledge not only of the German language, but of the people, and his intimate acquaintance with the heart of his people (as evidenced by his collection of folk-tales) make his grammar very fine reading. He says in his preface that he was as it were forcibly dragged into writing the historical German Grammar. He says that every word should be traced to its very root and that the living organic principle of its growth should thus be discovered. He regards language as a deep-lying principle of our being, which grows with our growth according to natural laws.[2]

(*viii*) *Rasmus Kristian Rask* (*1787-1832*).

Chronologically the first specialist in Comparative Philology in the 19th century is Rasmus Kristian Rask. His chief work is an "Investigation on the origin of the

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[1] See above Chapter VIII, § § 121-126.

[2] Delbrück, op. cit., p. 75.

Old Norse or Icelandic Language" (1818). His *Anglo-Saxon Grammar* brought him good fame. It was in fact Rask who first formulated the Law of Germanic Sound-shifting. Actually in the first edition of Grimm's *German Grammar* there is no mention of this law. In the second edition, however, Grimm has mentioned it and has worked it out in some detail. The work of Rask had appeared in the interval, and it was only Rask's early death that prevented the original discoverer from working it out himself. It was also Rask who fully established the genuineness of Anquetil du Perron's *Zend Avesta*. He pointed out that this language (Avesta) must be that in which Zoroaster's teachings were first given. He actually made a journey to the East (1819-1822) and brought back the oldest and best mss. of the Iranian Scriptures, which are new in Copenhagen.[1] Rask "had the sure eye of genius for linguistic relationships—no one has surpassed him in this respect, in fact no one has ever equalled him".[2] Rask's great merit lies not only in his correct determination of linguistic relationships but also—and here he is even greater—in his careful reasoning in substantiating them.

(ix) *Eugène Burnouf (1801-1852)*.[3]

He studied Sanskrit under Chezy, who was the first to give public lessons in that language anywhere in Europe. In 1826 Burnouf published, in collaboration with Lassen, his *Essai sur le Pali*, which introduced European scholars for the first time to the original teachings of the Buddha. In 1833 he puplished his great work, *Commentaire sur le Yaçna*, which was the first accurate work on the

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[1] *Grundriss der iranischen Philologie*, II, p. 41.

[2] Pederson, op. cit., p 26; see also p. 250.

[3] See obituary notice in JRAS., vol. 15.

Avesta texts and which corrected many of the mistakes of Anquetil. This great work might be called the starting point of all works on Avesta texts done in the West ever since. "No European Orientalist has exhibited greater amount of research, penetration and patience than Burnouf; nor has any one surpassed him in the clearness and precision with which he has recorded the results of his labours." He also worked on the Cuneiform Inscriptions. His work on Pali and Buddhism may be regarded as the pioneer work in Europe.

§ *284. Collecting the material.*

The science was now definitely founded and from 1833 up to about 1855[1] the main characteristic of philological work is the collection of an enormous number of facts. It was a period of a great deal of what some people call drudgery. But it was extremely necessary, for only upon the material thus collected was it possible later on to build up the theories of modern linguistics. In certain respects it is a period when the first beginnings of some of our modern theories were made and at least one branch of linguistics was definitely founded during these years.

(i) August F. Pott (1802-1887).

"Scietific etymology owes its origin to August Friederich Pott", says Jackson.[2] His labours are most voluminous. He undertook in his great work—*Etymologische Forschungen*—to reduce to greater order the great work of Bopp. His method was severely scientific and although he displays a very varied and rich imagination in discovering resemblances, he never allows it to go out of control. We are indebted to him for a large number of very accurate etymologies. He also made the first "table of comparative sounds" which comprised practically all the Indo-European languages then recognised.

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[1] The period, namely, between Bopp's *Comparative Grammar* and Steinthal's book on the mutual relations of Grammar, Logic and Psychology (*Grammatik, Logik, Psychologie, ihre Prinzipien und ihre Verhältnisse zu einander*).

[2] *Philology*, p. 12.

(ii) *Friederich Max Müller (1823-1900).*

Though he did not rank very high as a philologist (i.e. in the domain of comparative or historical grammar), Max Müller has a great many claims upon our gratitude. He was the first to make this subject popular and even to-day in spite of a good deal of doubtful philology and half-true conclusions his lectures on *The Science of Language* form very fascinating reading. His most valuable works scientifically are his great edition of the Rigveda, with Sāyaṇa's commentary (1849-75), and the great undertaking of the fifty volumes of the *Sacred Books of the East.* He founded the science of Comparative Mythology and Religion, and his contributions to Urgeschichte too are of value, although occasionally his conclusions are more poetic and imaginary than scientific.[1] Max Müller naturally devoted much attention to the languages of India and in 1854 he established the existence of the Munda languages as distinct from the Dravidian.

(iii) *Rudolf Roth (1821-1895), and (iv) Otto Böhtlingk (1815-1904).*

Another great work was begun towards the end of this period which has proved to be of immense help to all students of language. It was the great *St. Petersburg Dictionary of Sanskrit* compiled by the labours of Roth and Böhtlingk. It tries to trace to its root every word given therein. As a leading scholar of the Veda Roth recognised the value of Sanskrit for an understanding of the Avesta. Anquetil had depended wholly upon the Pahlavi tradition which he had got from the Parsi priests at Surat and Burnouf had followed this method. Roth, however, maintained that this tradition was worthless. His contention was that in the first place Avesta must be explained from and by itself, by searching out and comparing parallel passages and similar groups of words and ideas as found in the almost contemporary Vedas. In this respect he has certainly gone deeper and has gained a better insight into the real teaching of the Avesta than can be obtained by depending entirely on the Pahlavi tradition.

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[1] That was probably due to the poetic strain in his heredity; his father was one of the well-known poets of Germany. Whitney has been his most unsparing, yet, on the whole, his most just critic.

(*v*) *August Schleicher* (*1823-1868*).

The great dominating figure of this period is August Schleicher. He came practically at the end of the period and his greatest work, the *Compendium*, actually falls outside the period.[1] He gathered together the work done during this period and put it in an organised form. This remarkable work consisted of a "portrait sketch of each member of the Indo-European family, with an outline picture of the Aryan mother in the background".[2] His results are no longer tenable in the light of later research and no one now professes to be able to compose in the parent Indo-European speech as he used to do, but still his work points out the path for the future and makes a decided advance on the work of Bopp. He also believed that Philology was more a natural than a historical (or human) science.

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[1] It was published in 1861. The full title is *Compendium der v rgleichen den Grammatik der indogermanischen Sprachen.*

[2] Jackson, *loc. cit.*

(*vi*) *Friederich Spiegel* (*1820-1895*).

He began his career as a student of Pali. After taking his degree he spent some time in Copenhagen looking through the Avesta mss. collected by Rask. From that time he devoted himself exclusively to the study of Iranian languages and culture. His first important work was about the Pārsī (Pāzand) language, in which the commentaries on the Avesta texts had been written. He had made elaborate plans for editing the complete Avesta texts together with their ancient commentaries as also a full translation of these. The first two volumes of the Avesta texts with the Pahlavi-Pāzand commentaries did appear in 1853-1858. But Westergaard's complete edition of the Texts having appeared in 1852-1854 at Copenhagen, Spiegel gave up the idea of editing the remaining texts.[1] But Spiegel went on with the work of translation of the texts, which appeared in three volumes during the years 1852 to 1863. This translation was rendered into English by Bleek in 1864. In this translation Spiegel has adhered to the Pahlavi tradition, following the lead of Anquetil and Burnouf. He has also done some valuable work on the Old Persian Inscriptions. Among the earlier Iranists Spiegel holds a very high place; and as the teacher of K. R. Cama he may be regarded as the "father" of the modern Parsi Iranists in India.

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[1] Westergaard had similar plans of publishing a complete translation as also of a full grammar of the language. But after Spiegel's translation had appeared he remained satisfied with the single volume of the Texts.

(*vii*) *Georg Friederich Grotefend* (*1776-1855*).

Grotefend is to be remembered in connection with the decipherment of the Old Persian Inscriptions. In 1802 he took up two of the Inscriptions from Persepolis, which had been copied out by Niebuhr in 1765 during his travels through Iran. On careful scrutiny Grotefend was convinced that these two Inscriptions referred to two kings and were of a very closely similar import. He guessed correctly that the two different groups of signs could only stand for the names of the two kings. And he ventured upon the bold guess that one of them was Darius the Great, the son of Vīstaspa (Hystaspes) and that the other was Xerxes, the son of Darius. Working on this hypothesis he discovered the phonetic values of thirteen signs; of these nine were perfectly correct.

(*viii*) *Sir Henry Rawlinson* (*1810-1895*).

He was an officer in the East India Company's Bombay Army, and was posted in southern Iran. Here in 1835 he set about the task of discovering the secret of the Cuneiform script. The great Inscription of Darius at Behistun specially attracted him, and having heard of the work of Grotefend and others, he first of all made himself fully acquainted with all that had been done hitherto. His own very thorough knowledge of the language and dialects of Iran proved to be of immense help in his task. But before he was well started he was sent to Kabul on a delicate political mission, and so it was not until 1843 that he was able to return to Iran and to begin working actually on the Behistun Rock. With strenuous labour, often involving great risk of life and limb, he succeeded in taking full copies (rubbings) of all the inscriptions on the Behistun Rock, including the almost inaccessible Babylonian and Elamitic texts. He published the results of his investigations together with a full translation of the Old Persian text in 1846. Soon afterwards it was completely demonstrated that Rawlinson had indeed solved the problem of the Old Persian script and from that the other texts were also worked out and the deciphering of all sorts of Cuneiform Inscriptions was put upon a sound basis.[1]

(ix) *James Prinsep (1799-1840).*

As regards the ancient Indian Inscriptions, two clearly marked out scripts had been noted fairly early, and these had been deciphered a few years before Rawlinson's publication of his investigations. In the case of the Indian scripts some bilingual (Pali and Greek) coins of the Indo-Greek kings had given the first clue. The Kharosthi script was deciphered first, and herein Prinsep was one of the earliest workers. But his name is specially associated with the reading of the Brāhmi script. He gave the Brāhmī alphabet in full in the year 1837. Here also it was a bilingual coin of the Indo-Bactrian king, Agathokles, which furnished the first clue.

§ 285. *The Junggrammatiker*

(i) *H. Steinthal (1825-1899).*

The year 1855 saw the publication of a work by a young man named Steinthal. The work was by no means a very remarkable one, but it seemed to open out a new way for philologists. It dealt with the mutual bearing of grammar, psychology and logic upon one another. Steinthal was the first scholar to point out the importance of psychology for the student of languages. The new era of psychological philologists did not begin definitely with Steinthal's book, but it was perhaps the earliest work indicating the new tendency. At that time, and for another twenty years or so, Schleicher was the great master of European philologists. It was in derision that the name *Junggrammatiker*[1] was given to them. Their insistence on psychology was their main point of difference from the older people. The great fame of Schleicher prevented the spread of the new views for some time, but slowly and surely the truth that was in them forced itself upon the learned world and the young grammarians triumphed in the end. Steinthal's psychology started it, and it was carried on in the first instance by Leskien, the famous scholar of Slavic-philology.

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[1] For a very readable account of Rawlinson's work at Behistun see David Masters, *The Romance of Excavation*, chap ix. The British Museum publication on *The Inscription of Darius the Great on the Rock of Behistun* also gives a fine account of Rawlinson's achievement (Introduction, pp. xvi ff.)

(ii) *Hermann Osthoff*, (iii) *Karl Brugmann and* (iv) *Hermann Paul.*

The real struggle of the Junggrammatiker has centered round three great names: Osthoff, Brugmann and Paul. The former two were long associated together as workers and their joint work embodying their researches, *Morphologische Untersuchungen*[2] is the pioneer work of the new school. Brugmann was recognised as the greatest of the new generation of philologists. He planned and lived to complete the vast *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen.*[1] Paul had been the famous exponent of the principles and philosophy of speech. His epoch-making work *Prinizipien der Sprachgeschichte* (the Principles of the History of Language), is still the standard book on the subject.[2]

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[1] I.e. the "young grammarians", the adjective implying both new-fangled as well as wanting in years and wisdom. This new schoo started in Leipzig, where one of the greatest of Modern philologists, Kar Brugmann, lived and worked.

[2] The whole work is in five volumes, the first volume appeare in 1878.

(v) *W. D. Whitney (1827-1894).*

Whitney was the first American philologist of note. He dealt with language as a human institution and hence to him Philology was a part of historical or "moral" science. He emphasised the fact that language is the reflection of a nation's mind. He is the sanest and most level-headed writer in English on the general principles of the science and has done much to counteract some of the imaginary and poetical theories of Max Müller. Whitney was a pupil of Bopp and Roth. In collaboration with the latter he edited the *Atharva Veda* (1856). In 1879 he published his chief work, *A Sanskrit Grammar, including both the Classical Language and the Older Dialects of Veda and Brahmana.* In this book for the first time the facts of Sanskrit language were set forth in their true historical perspective.[3] Here he connects up the grammar of the Vedas and the later classical language into a systematic whole. In 1885 he published a supplement to this grammar, a book on *The Roots, Verb-Forms and Primary Derivatives of the Sanskrit Language.* His works on general linguistics are *The Life and Growth of Language* and *Language and its Study.* There are also two volumes of collected *Linguistic and Oriental Essays* by him which contain very interesting topics like Avesta, Comparative Mythology, Hindu Astronomy etc.

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[1] The whole in five volumes. The last three are in association with Delbrück and deal with Comparative Syntax. Volume 1 appeared in 1886.

[2] Translated into English by H. A. Strong; also adapted for English (principally) by H. A. Strong, W. S. Logeman and B. I. Wheeler.

[3] I myself learnt Sanskrit at school according to the "old method" which takes note of the Classical language alone and utterly neglects the Vedic. I remember very vividly the great confusion caused in my

(vi) B. Delbrück.

Among the Junggrammatiker Delbrück must be mentioned. He collaborated with Brugmann in the Encyclopaedia of Comparative Grammar and contributed the three volumes on Syntax. In fact he may be called the founder of Comparative Syntax. His knowledge of Greek, both ancient and modern, was unsurpassed and to this he added a profound knowledge of Sanskrit, Latin and other languages.

(vii) Julius Jolly.[1]

He began his work as a writer on comparative grammar, specially on Greek. He has done much good work in the field of comparative syntax and he was amongst the earliest writers on the subject. He was an excellent Sanskritist and his special branch was Hindu Law and Custom. His deep knowledge of Greek language and antiquities helped him considerably in elucidating many obscure points

mind when I first read through Whitney's *Sanskrit Grammar.* It may be worth mentioning here that Whitney has also compiled a *German Grammar* in which the portion dealing with the word-building in German is a masterpiece of lucidity.

[1] He was my revered *guru* at the University of Würzburg.

in Sanskrit books on *Dharmaśāstra* and *Arthaśāstra.* Whatever subject he touched he went into the fullest details and whatever he wrote was consequently of importance and deserving of respect. On account of his great knowledge of Hindu Law he was invited to deliver the Tagore Law Lectures at the University of Calcutta. It is also worth noting that his standard work on the Hindu system of Medicine won for him the degree of *Doctor of Medicine* from Oxford.

(viii) O. Schrader (of Breslau) (1855-1919)

He was Professor of Slavic Languages and he worked chiefly on problems of Urgeschichte. He started the theory of "the Indo-European homeland" being situated in the Volga basin.[1] His important works, epoch-making in their way, are *Sprachvergleichung und Urgeschichte* (1906) and *Reallexikon der indogermanischen Altertumskunde* (1917). Both these works are of great interest to all students of linguistics and antiquities of the Indo-Europeans. Another important contribution of Schrader in his article on "Aryan Religion" in Hastings' *Encyclopaedia of Religion and Ethics.*

(ix) Peter Giles[2]

He was Master of Emmanual College, Cambridge, and Reader in Comparative Philology in that University. As a student in Germany he had imbibed very fully the teachings of the Junggrammatiker, and he carried forward their work in England. He was the author of *A Short Manual of Comparative Philology* which is based mainly on Latin and Greek, both of which languages he had mastered thoroughly. He also contributed a very interesting chapter on "The Aryas" in the Cambridge History of India.[1] His strong points were his lectures and his method of teaching his subject. He was a voracious reader with a wonderful memory, and hence his lectures were always interesting and full of the latest information.

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[1] See 165 above.

[2] He was the *guru* who initiated me in the Science of Languages.

§ 286. *The fundamental ideas of the 'Young Grammarians'.*

The Junggrammatiker laid great stress on five points, and they consistently observed them in all their writings.[2]

(i) *Study of living speech is equal in importance to that of the 'Classical' Languages.*

The Junggrammatiker recognised the importance of *living* languages for the purpose of linguistics. This is the speech we can hear every day and can therefore study at first hand. We can also side by side observe the speakers of the language. Thus we get a real insight into the connection between language and its speakers. This point is of supreme importance in all solid linguistic work.

(ii) *Problems of ultimate origins are regarded as insoluble in the present state of our knowledge.*

The older writers devoted a lot of time and energy to the ultimate problems of language, for example, to matters relating to the origin of speech, the linking of sense and sound in roots and so forth. Modern scholars seem to think that Humboldt was wiser in maintaining that the beginning and the end are unknowable, and that we have to deal only with the middle (i.e., the recorded) aspect of the phenomena of speech. The time and energy thus saved may be devoted to other more practical and more fruitful investigations.

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[1] Vol. I, Chapter III.

[2] Adapted from Jackson, *op. cit.*

(*iii*) *The physiological and psychological aspects of speech are sharply distinguished*

The older generation maintained that the production of sound was due to the vocal organs and to mere physical variation of sound, in other words, that the phenomena of sound-change could be very well explained by the mere mechanical laws of physiology. Such was the older idea; but the new school maintains that it is a ***human*** being who speaks and that his mind also works simultaneously, with his vocal organs. No speech can exist without ***both*** these elements—the physiological and the psychological, the mechanical and the mental—being present. The former can be measured accurately and is calculable for any language at any period of its history. The latter is an uncertain factor, which does not depend on any rule which could be definitely formulated. It is this aspect of speech which is mainly responsible for the irregularities in language. But though these irregularities can never be brought under a definite law they can always be explained as the result of the working of the human mind and in accordance with well-known laws of psychology.

(*iv*) *Analogy is considered an important factor in language growth*

Directly following from the preceding consideration is the admission of *analogy* as a very important factor in language growth. The human mind likes to think of things in an ordered fashion where each thing has its proper assigned place. It also expects that things which are similar, are to be associated together in closely related groups. And here the influence of analogy is very clearly marked.[1]

(v) *The mixing of various races has a great influence in the history of language.*

No human race can live and grow in an entirely segregated corner of the world and there remain utterly uninfluenced by other surrounding races. Races must mix together. They did so in the past and the mixing is still going on. When races mix their languages must also mix; and this fact in the history of a people is recorded clearly in the mixed dialects that result. In other words a "pure dialect" is an impossibility in nature.

§ *287. Some Western Indologists*

(*i*) *Georg Bühler (1857-1898)*

He studied Sanskrit under the most eminent scholars of his day, yet he was convinced that he could never learn Sanskrit except from the Pandits of India,[2] and so he came out to Bombay as Professor of Oriental languages. When in India he studied with the Pandits of Poona. He also organised on a firm basis the search for and preservation of Sanskrit and other manuscripts. On his retirement from India he was appointed Professor of Indology at Vienna. While there he started the idea of publishing the *Grundriss der Indo-arischen Philologie und Altertumskunde* (Encyclopaedia of Indo-Aryan Philology and Antiquities), and he himself contributed the first volume on *Indian Palaeography* (1896), a subject on which he was an undoubted authority. His tragic death by drowning in the Lake of Constance was a great loss to Indian learning.

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[1] See above, Chapter V.

[2] In this he followed the dictum of Goethe, "wer den Dichter will verstehen, muss in Dichters Lande gehen" (he who would understand a poet, must go to the land of the poet). It should never be forgotten that with all his shortcomings the Indian Pandit today uses Sanskrit as a *living* language.

(*ii*) *Karl Geldner (1854-1929)*

Though usually associated with Iranian studies on account of his magnificent edition of the *Avesta Texts*, Karl Geldner's first love, as also his last, was the Veda. He began his career as a student of the Veda, and for very many years he worked as Professor of Indian languages and culture. He wrote a great many papers and several books on the Vedic hymns, their grammar, and other kindred subjects. Naturally with the Vedas he took up seriously the study of Avesta and the Iranian languages, and for a time it seemed that he had definitely devoted himself exclusively to the study of Avesta. In 1896 he brought out his masterly edition of the *Avesta Texts*, which has to this day been accepted as *standard and authentic*. The chief value of this work lies in the very careful collation of the manuscripts and in the exhaustive list he gives of the variant readings. His *Prolegomena*, in which he gives a very detailed account of the manuscripts he has consulted is a model of lucid and scholarly treatment. Geldner had thought of a complete translation of the Avesta Texts, and it seems that he deliberately adopted the readings that he thought would be best suited for this purpose.[1] He has actually translated quite a number of the important Texts, including three of the longer Yashts (*Drei Yashts*) and he has given full annotations to these as well. Perhaps the most valuable contribution of Geldner to Iranian studies is his working out the theory of Avesta prosody and meter. Westergaard had already printed the Text of the *Gāthās* in a metrical form in his edition of the Avesta Texts. Geldner printed not only the *Gāthās* as metrical, but he also proved that considerable portions of the so-called "Younger Avesta" were also metrical. In 1877 he published a small book entitled *Über die Metrik der jüngern Avesta* (on the meter of the Younger Avesta). This was the first book on the subject, and until quite recently it was the only one available.

Later on Geldner dropped the idea of doing a fresh translation of the whole of the Avesta Texts, and during the last years of his life he went back to the *Ṛg-Veda*. He prepared a new translation of that very important work and the first volume of this translation (comprising the first four *Maṇḍalas*) was published in 1923. It is an excellent translation, embodying the author's most mature studies and enriched with very fine annotations. This volume represents the zenith of Geldner's scholarship. The second volume (completing the work) was ready for the press at the time of Geldner's death; it has not yet been published in consequence. As a teacher Geldner was an enthusiastic and lovable personality, and he had the rare gift of passing on his enthusiasm to his students.[2]

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[1] I have this on his own authority.

[2] I can never forget the one day I spent with Geldner at his home in Marburg. Even though he was not my teacher, that single day passed with him has always been an inspiration to me.

(*iii*) *Charles R. Lanman (1850-1941)*

He was the intellectual successor of Whitney in America. He carried forward the work of his great teacher in the shape of the noble *Harvard Oriental Series* which he had started and had been directing practically from the beginning. This series has given many a valuable work for the use of scholars. Lanman himself did a great amount of writing on varied subjects. His most useful work from the point of view of the ordinary student is his *Sanskrit Reader*, which is being widely used by beginners both in America and in Europe. Prepared as it is by the successor of Whitney, it is certainly very useful for beginners; it gives a correct scientific idea of the language, and is illustrated by some of the best passages from its literature. Lanman worked all his life to make the study of Oriental languages (particularly of Sanskrit) popular in America.

(*iv*) *Sylvain Lévi (1843-1936)*

Sylvain Lévi was as well-known and as beloved in India as he was in his native France. The year he spent at Rabindranath's Viśvabhāratī as "visiting Professor" (1920-21) brought most of our Indian scholars into close personal touch with him. To know him was to learn to respect his great learning, and to love him for his extremely fine personality. The modern tendency of scholars especially in languages, tends towards specialisation and this has led a good many of our scholars in India to neglect all kindred branches.[1] For all such scholars contact with Lévi came as a much needed corrective. He constantly emphasised broadness of vision and mental sympathy with kindred topics.[1] He said it was very necessary to have a whole view of the forest first before studying our own clump of trees. His own knowledge was truly encyclopædic covering such apparently unconnected topics as Sanskrit, Tibetan, Chinese, Nepali, Iranian etc. Above all he never tired of pointing out the essentially *human* aspect of all study. To him everything was part of one great whole—the cultural heritage of Asia—and he maintained that by keeping this constantly before us we would appreciate fully the value of each part. This is the lesson he has left to his pupils, a lesson very badly needed by all students in India today.

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[1] This is specially true of our old-fashioned Hindu and Parsi scholars, who know nothing beyond their own special subjects.

(*v*) *R. Pischel (1856-1909)*

Pischel's chief service to Indology was in putting together all that had been done by his predecessors with regard to Middle Indo-Aryan languages. He contributed a volume on the Grammar of the Prakrit Languages (*Grammatik der Prakrit Sprachen*) to the *Grundriss* of Bühler. In this he has systematised the work done on Middle Indo-Aryan by previous scholars. He was also a pioneer in Apabhraṃśa studies on which he has written a monograph, *Materialen zur Kenntnis der Apabhraṃśa.* Pischel worked in India as Professor during the last years of his life. His interests went beyond the Prakrits; one special branch of his studies was the language and folklore of the Gipsies.

(*vi*) *Hermann Oldenberg*

He was one of the big authorities on Buddhist literature and Pali. His "Life of Buddha" was a famous work.

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[1] Once in conversation with me Lévi urged that a good Iranist must have a good knowledge of Chinese. The writings of Laufer, Peillot and of H. W. Bailey seem to prove the truth of this advice.

He wrote copiously on various Buddhist texts. He was equally at home in Comparative Mythology and Comparative Religion. One of his important books is *Die Religion der Veda* (1894). He has also written an authoritative volume of annotations on *Ṛg-Veda* hymns. There is also a volume of collected essays from his pen entitled *Aus Indien und Iran*. He has also written a *History of Sanskrit Prose*, an important work on syntax.

(vii) *Hermann Jacobi*

He was another of the great authorities on Middle Indo-Aryan. His special study was Jainism and Jaina literature. His special line among the Prakrits was Mahārāṣṭrī and Old Marāṭhī, which was descended from it. His selections from Old Marāṭhī Poetry is a valuable contribution to Indian Linguistics. While a Professor at the University of Bonn he had trained a number of Indian students in modern scientific methods of research. The most promising of these, Pandit Todar Mal of Lahore, died at Bonn soon after the end of World War I.

(viii) *Jacob Wackernagel (1853-1940)*

He was one of the finest among the European Indologists, and he was certainly one of the ablest. He was also keenly interested in Iranian studies and he collaborated with Andreas in his reconstruction of the Original Gāthās of Zarathushtra.[1] His most important work, of course, is his *Altindische Grammatik*, a very comprehensive grammar of Sanskrit. So far three volumes of it have appeared, and the work has not been completed. The first volume appeared as far ago as 1896, and it deals with Phonology and the rules of Sandhi. The second volume

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[1] See below § 288 (*vii*).

(part one) was published in 1905 and deals with nominal-stem-building and with compounds. The third volume appeared twenty-five years later, in 1930; it deals with flexions of nouns, numerals and pronouns. This third volume was written in collaboration with Albert Debrunner. In the preface to this third volume two more volumes are promised, the second part of Vol. II, completing the subject of stem-building, and Vol. IV, dealing with verbs and adverbs. This last was to be in charge of Debrunner. Wackernagel says that the unpublished volumes represent notes made during fifty years of reading and study of the subject.

(ix) *Bishop Caldwell (1814-1891)*

Bishop Caldwell of Tinnevally had spent a lifetime in South India and he knew the Dravidian languages thoroughly well. He was also a trained "philologist." In 1856 his *Comparative Grammar of the Dravidian Languages* appeared and was enthusiastically received by students of Dravidian languages. It still remains the standard work on the subject.

(x) *John Beames*

He joined the Bengal Civil Service and came out to India in 1857. As soon as he had settled down to his duties he began to study the languages of India. Ten years later he gave a summary of all the knowledge about the vernaculars of India that Europe possessed at the time in a small book, *Outlines of Indian Philology*. In 1872 the first volume of his *Comparative Grammar of the Aryan Languages of India* was published. The work was completed in three volumes. It is a masterpiece in its own way, and it has been the foundation of all subsequent works on Modern Indo-Aryan.

(xi) *Dr. Hoernle (1841-1918)*

He wrote his first essay on Indian Linguistics in the *Journal of the Asiatic Society of Bengal* in the same year that the first volume of Beames appeared. In 1880 he brought out his *Grammar of Eastern Hindi compared with the other Gauḍian Languages*. This work, too, is a classic on Indian languages.

(*xii*) *Dr. Ernst Trumpp*

Dr. Trumpp was one of the earliest workers in the field of modern Indo-Aryan languages. In 1872 he published a very fine *Grammar of the Sindhi Language compared with the Sanskrit Prakrit and the Cognate Indian Vernaculars*. The next year he published his *Pashto Grammar*. Both these grammars are valuable even today.

(*xiii*) *Jules Bloch*

During the Second World War, Professor Jules Bloch narrowly escaped capture by the Nazis who after the fall of Paris came to his house in Sèvres to apprehend him, and possibly to send him to Germany, as he was Jewish. After the end of the war he returned to Paris to resume his interrupted work. He is a deep student of Indo-Aryan in all its phases, and his writings show a clear and comprehensive grasp of the growth of our Modern Indian Languages. His many articles, and his books have enriched the field of Indology, particularly in Linguistics. His finest work is on the Marāṭhī Language, which has served as a model for most subsequent writers on historical grammars of Modern Indo-Aryan languages. Two other noteworthy works of his are his monographs on Indo-Aryan and on Dravidian. Prof. Bloch is at present studying the structure of Andamanese. He is now Professor of Sanskrit and Indology in the Collége de France.

(*xiv*) *Heinrich Lüders*

He was another exile to America from Nazi intolerance of Jews. For many years he was Professor in the University of Berlin and brought fame to his University by his numerous researches in every branch of Oriental learning. His greatest claim to fame is his putting together and deciphering many thousands of paper fragments sent to him by the Central Asian expedition. In this work he was very ably assisted by his talented wife. He had a number of Indian students working under him, the greatest of them was the late Dr. Vishnu S. Sukthankar. Lüders died in America quite recently.

(*xv*) *Sir George Abraham Grierson*

He spent the whole of his official life in Behar, and he became a Behārī himself to all intents. His deeply sympathetic heart enabled him to enter fully into the life of the people amongst whom he worked. Blessed with a rare linguistic capacity he rapidly mastered the various dialects of Behar. During the years he spent as administrator he produced a small comparative grammar of the dialects of Behar and an exceedingly interesting volume on *Behar Peasant Life*. The fame of Grierson rests chiefly and almost entirely on the huge volumes of the *Linguistic Survey of India*. For this task he enlisted a large number of collaborators, some of whom were very able and trained "philologists" like Sten Konow, and he got the enthusiastic co-operation of all. The main plan and the execution of the task was distinctly Grierson's own. He has left his impress definitely on every volume. These volumes would remain standard works on Modern Indo-Aryan dialects for many years to come. The amount of valuable information contained in them is truly staggering. It was but fitting that Grierson was invested with the Order of Merit on the completion of this great task.

(*xvi*) *Edward James Rapson*[1]

He was Professor of Sanskrit at Cambridge during many years. A very quiet, unassuming and lovable person, he won the respect and affection of all his pupils. Before he took up the Professorship at Cambridge he was in charge of the collection of the ancient Indian Coins in the British Museum. He was, indeed, an authority on ancient Indian Numismatics, and he contributed the volume on *Indian Coins* in Bühler's *Grundriss*. He was a first rate student of Greek and of Greek Antiquities. A number of Sanskrit fragments discovered during the Turfan exploration had been sent to Rapson for deciphering,[1] which task he accomplished successfully. During the last years of his life Rapson was busy editing the *Cambridge History of India*. He was in special charge of the first two volumes dealing with per-Moslem India. The second volume was almost completed at the time of his death; but its publication has been held up by World War II.

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[1] He was my Professor in Sanskrit at Cambridge. He made me read through Whitney's Sanskrit Grammar from cover to cover.

§ 288. *Some Western Iranists*

(i) *Martin Haug (1827-1876)*

He was the son of a poor Bavarian peasant and his early struggles to obtain an education in face of every obstacle reads like a romance.[2] At last he did succeed in learning all he had set his heart upon, particularly the languages and the history of the Religions of the East, and in 1854 he was established as a teacher at Bonn. His inaugural discourse was upon "Zarathushtra and his religion." His first important work was on *The Five Gāthās of Zarathushtra* (1858-60) wherein he has given a Latin paraphrase, a German translation and copious notes. In 1858 the Bombay Government offered him the post of Superintendent of Sanskrit Studies at Poona. This he accepted with great joy, for he felt that he was fulfilling the chief aim of his life. His object in coming out to India was threefold: (1) to acquaint himself at first hand with Hindu and Zoroastrian practices and traditions; (2) to introduce the scientific methods of studying ancient languages among the scholars of India; and (3) to collect manuscripts from India. On account of his very friendly nature and extremely unassuming character he succeeded eminently in achieving all these three objects. In 1862 were published his *Essays on the Sacred Languages, Writings and Religion of the Parsis* and in 1863 followed his edition and translation of the *Aitareya Brāhmaṇa*. Both these works show a detailed knowledge of the ritual and ceremonial of both these great religions such as no other European writer has shown. Having been a pupil of Roth, he had shown a tendency to reject the Pahlavi tradition, but this intimate contact with the learned exponents of the religions of the East altered this view very materially. One of his intimate colleagues in Poona was the Parsi scholar Dastur Hoshang Jāmāsp-Āsā. In 1866 Haug returned to Germany and held the chair of Sanskrit and Comparative Philology at Munich until his death in 1876. During these years he published, in collaboration with Dastur Hoshang, *A Pahlavi-Pazand Glossary* (1870). His famous *Essay on the Pahlavi Language* is an introduction to this work. Another important work during his last years was an edition of *The Book of Ardā Virāf* done in collaboration with E. W. West (1874).

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[1] I remember his showing me a piece of wood on which an exquisite Sanskrit verse was written, on the back a stable account!

[2] See his biography by Prof. E. P. Evans prefixed to the "popular edition" of Haug's *Essays on the Religion of the Parsis.*

(ii) *E. W. West (1824-1895)*

He is perhaps the most eminent among the elder Pahlavi scholars of the West. Though a great deal of his work was done over forty or fifty years ago, it is still of great value to all students. He was as officer of the Bombay Government and his attention was drawn to Pahlavi by the discovery of the Pahlavi inscriptions in the Kanheri Caves near Bombay.[1] He took up the study of Pahlavi with zeal and carried it on throughout his life. He has edited numerous texts from Pahlavi and his five volumes of "Pahlavi Texts" in the *Sacred Books of the East*[2] are works of great accuracy and show very deep learning. He also read a paper on *Sasanian Inscriptions* which was later printed. His most important contribution is his essay on "Pahlavi Literature" in the *Grundriss der iranischen Philologie*. West is notable for his extreme accuracy and for his deep insight into the spirit of the Pahlavi language. Even today most of the readings he had adopted and his translations are found to be trustworthy. His unequalled learning and accuracy have raised Pahlavi research from the lowest stage to that of a science, and to this extent West has become indirectly a reformer of Avesta research".[3]

(iii) *Ferdinand Justi*

In 1864 he published a "Handbook of the Zend Language" containing a grammar together with selections for reading, and to these he added a complete dictionary of all the words found in Westergaard's Texts. Besides numerous essays and papers on Iranian topics, he also compiled the *Iranisches Namenbuch* (1895), a dictionary of all the proper names occurring in the whole of Iranian Literature, including the post-Sasanian period. It is a work of great utility showing accurate and painstaking research. The most important work of Justi is his edition of the Pahlavi *Bundahishn*.

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[1] These caves are Buddhistic and are situated about 20 miles north of Bombay. The two Pahlavi Inscriptions there are dated A.C. 1003 and A.C. 1021. These record the names of two tourist parties of Zoroastrians who had visited the caves.

[2] These are vols. v, xviii, xxiv, xxxvii and xliv.

[3] Geldner in *Gundriss der iranischen Philologie*, II, p. 44.

(*iv*) *Baron C. de Harlez*

He was a Belgian and Professor at the University of Louvain. He knew both Avesta as well as Pahlavi and wrote extensively on all Iranian topics. He has prepared introductory Manuals for the study of these languages, which are really fine books for beginners and give very good selections for reading. His most important work is the complete translation into French of the Avesta Texts to which is added a masterly Introduction extending to 248 pages. He also wrote on *The Origins of Zoroastrianism and on The Homeland of the Áryas.* In the former he puts forward the theory that Zoroaster got his uncompromising monotheism from the Semitic nations with whom the Iranians had come into contact.[1] This bias runs throughout the whole of his exposition.

(*v*) *James Darmesteter (1849-1894)*

He adhered entirely to "tradition" in his translation of the Avesta. His most important work is *Le Zend Avesta* (1892-93) which gives a French translation of all the Texts, with a fine Introduction and valuable annotations. Being a Jew he has got a very large measure of the Judaic bias and he bases his whole chronology upon this preconception. Then again he sees in all Iranian legends "a series of meteorological myths." Apart from these two points he is a reliable and accurate guide. He translated the Avesta Texts (except the *Yasna* and the *Visparad)* into English for the *Sacred Books of the East* series.[1] Two interesting and valuable monographs from his pen, *Haurvatat et Ameratat* and *Ormazd et Ahriman*, are useful for students of comparative religion and ancient religious thought. Darmesteter also wrote a book on the poetry of the Afghans. But perhaps his most valuable contribution to Iranian lore is his volume of *Etudes Iraniennes* which is a veritable treasure house for a student of Iranian lore.

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[1] The late Sir Muhammad Iqbal, the great Islamic scholar and poet held similar views. He had communicated this to me in a letter.

(*vi*) *Lawrence H. Mills*

Trained up to be a Christian clergyman he devoted the whole of his fairly long life to the study of Iranian languages and particularly to the elucidation of the *Gāthās*. He translated the *Yasna* and the *Visparad* for the *Sacred Books of the East* series.[2] As the *Gāthās* form part of the Yasna[3] Mills regarded this work as mere preparation for the far more important task of the full working out of the *Gāthās*. He has written a number of books about the connections between the religion of Iran and those of the Jews and the Christians. He had planned very carefully for his great work on the *Gāthās*, for he wanted to put in all that "tradition" had to offer and to give a complete modern "philological" rendering as well. The first two volumes came out together in 1892. The first contained the Text in the original script, the Pahlavi commentary (in transliteration) and an English translation of the same, the Sanskrit version of Nairyosang (also in transliteration) together with its English rendering, and a "Parsi-Persian" version. This comprised the full "traditional" matter. To these Mills added his own Latin paraphrase and a "free" English rendering. The second volume contained his annotations, which are very copious and at times so complex as to be beyond comprehension. He had also planned a *Gāthic Dictionary*, but he did not live to complete it. Mills was an indefatigable worker. He often tried his hand at giving Sanskrit renderings of Avesta (specially Gāthā) passages. Occasionally Mills is really brilliant in his suggestions, but on the whole, and specially in his annotations he is fearfully involved and verbose. It would seem that he belonged to the "elder school of philologists" and that he was more akin to them than to the Junggrammatiker. Hence his works have received less than their due from the more modern German Iranists. In any case as far as grammatical ideas are concerned Mills is very emphatically "ancient."

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[1] Vols. iv and xxiii.

[2] Vol. xxxi.

[3] Out of the 72 chapters (*Hās*) of the *Yasna* the *Gāthās* comprise chapters 28-34, 43-51 and 53.

(vii) F. C. Andreas

Many have regarded Andreas as the greatest of the German Iranists. He died a nonagenarian in 1930 after many years of teaching at Göttingen.[1] To Andreas belongs the real credit of restoring and translating the great Pāikulī Inscription of the Sasanian monarch Narseh (293-301 A.C.). It was in the seventies of the last century that Andreas spent almost a year in Persia and worked at the restoration of that inscription. His knowledge of the languages and dialects of Iran (ancient as well as modern) and of Semitic languages was unequalled by any of his contemporaries. The real worth of the learning of Andreas was proved soon after the discovery of the Turfan fragments. He made a deep study of these as well as of the script in which they had been written, and from that he formulated his epoch-making theory about the origin of the "Avesta script" as we know it today, which is used in the mss. and in the printed Texts. This new idea of Andreas, first formulated in a paper read at the Hamburg Congress of Orientalists many years ago, produced something like a revolution among the Iranists of the West, and soon Andreas had a very strong following, including the famous Prof. A. Meillet of Paris. After this primary discovery wherein Andreas gave the original phonetic values of the various "Avesta letters", he started on the much more important and ambitious task of fixing the original Avesta Texts as restored by the Arsacid (Parthian) ruler Valkhash (Vologeses) I (51-77 A.C.). Andreas maintained that the script used for this "Arsacid Text" was the original script from which the later "Avesta script", as known today, has been derived. He gave accordingly the original "Arsacid Text" (in Hebrew characters) of the *Gāthās*.[1] He compares these restored Texts with the "Vulgate" as given by Geldner, and he adds very illuminating notes. These papers are of the utmost importance for every student of the *Gāthās*. Andreas has thrown a brilliant light on many obscure passages from the *Gāthās*, and many of the new readings he has suggested are quite convincing.

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[1] One of his pupils was Dr. A. Siddiqi, who is at present Professor *of Arabic in the University of Allahabad.*

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[1] The papers concerning *Gāthā Ahunavaiti* were published in the lifetime of Andreas and in several of them he collaborated with Jacob Wackernagel. The four chapters of *Gāthā Ushtavaiti* were published some years ago by his pupil Prof. Lommel from his class notes.

(*viii*) *A. V. W. Jackson*

He was the greatest Iranist of America. His whole life was spent in active pursuit of Iranian learning. He has written copiously on Iranian topics, languages, religions, and culture. His most admired book is *Zoroaster, the Prophet of Ancient Iran*, in which he sets forth the "traditional" life of the Prophet and gives all that has ever been written about Zarathushtra. Another remarkable work of his is about the electric "religion of Mani", which arose about the middle of the 3rd century of Christ. Jackson has also published a collected volume of his essays, in which he has given an English translation of the paper on "Iranian Religion" contributed, originally in German, to Geiger and Kuhn's *Grundriss der iranischen Philologie*. His *Avesta Grammar*, modelled on Whitney's *Sanskrit Grammar*, is the only good grammar of the language in English. He has trained one Parsi pupil, Shams-ul-Ulema Dastur Dr. M. N. Dhalla, high-priest of the Parsis of Sindh and Balocistan. This very devoted pupil carries on the work of his revered *guru* in India.

(*ix*) *Christian Bartholomae*[1]

He was in many respects one of the most remarkable Iranists of the West. His monumental work is his huge.

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[1] He was my own revered *guru* of Iranian languages at Heidelberg. As teacher he was the best I ever had, and as man he was a noble specimen of humanity.

Altiranisches Wörterbuch (1904), followed by its supplement *Zum altiranischen Wörterbuch* (1906). This supplement embodies all the later researches, including the Turfan discoveries and all the consequences that flowed therefrom. This great work occupied all his time for well over twenty years.[1] This dictionary not only gives every word occurring in the Avesta Texts and in the "Avesta" Fragments" and in the Old Persian Inscriptions, but also gives a very detailed bibliography mentioning all works, whether books or magazine articles, where that particular occurrence of the word has been discussed. The notes added to each word form the most interesting as well as the most instructive part of this dictionary. Often in these he enters upon a discussion of the opinions of other scholars. But Bartholomae is often very short with scholars whose opinions differ from his own. He was also a profound student of Pahlavi, and he has written a series of papers on "A Sasanian Book of Laws" (the *Mādigān-i-Hazār Dādistān*). Another remarkable series of his papers deals with the "Pronunciation of Middle Iranian", which has been the subject of great discussions for several generations. Bartholomae had trained several German students notably Dr. Wolff and Dr. Reichelt. He has also trained two Parsis, Dr. Jamshedji M. Unwala and myself. There is besides Prof. Poure Dawoud of Teheran, who has also been his pupil. The end of this great Professor and noble teacher was one of the profound tragedies of World War I. His only son was killed in battle, and he died broken-hearted and in abject poverty during the days of depression following the war.[1]

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[1] I learnt this from Bartholomae himself. He showed me thousands of "index-slips" he had written out as preparation for this work.

(x) *Edward G. Browne*[2]

He was a medical man by training, who out of sheer love for the subject took up the study of Oriental languages. He spent almost a year in Persia by way of preparation at the end of which he got the appointment as Professor of Arabic in the University of Cambridge. He has written numerous papers on Persian, Arabic and Turkish Literature and on Islamic history and culture. His greatest love was for Iran, and Persian was almost his mother-tongue.[3] He had also studied the earlier pre-Islamic literature of Iran (mainly in translations) and was not particularly impressed by it; he thought it was "childish."[4] But for the literature of Iran after the Arab conquest and for the spirit of the Iranian people Browne's admiration and love were unbounded. He never wearied of singing the praises of Iran and of the great writers of Persian. His four volumes of *The Literary History of Persia,* together with the supplementary volume on the *Press and Poetry of Modern Persia,* lay bare the very soul of a great nation. These volumes give not merely a history of the literature but they also explain the cultural development of the Persians from age to age. They are written with deep insight and sympathy. In every page Browne has poured out his deep love for the land and its people. He knew Persian literature better than any native of Persia. He possessed full information about the "inner workings" of Persian history, and so his class lectures were always very lively and full of interest. He had the gift of inoculating his students with his own enthusiasm for Iran. *Watan parastī*, worship of the motherland, has become almost the "religion" of modern Iran; and Browne was certainly one of the greatest among the worshippers of Iran.

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[1] I had a letter from his wife describing his last days. I had another letter from Geldner about the same time setting forth the great tragedy that had overtaken the learned world of Germany.

[2] I used to attend his classes in Persian and Arabic.

[3] Browne could speak Persian as rapidly and as fluently as English. His Persian was free from any trace of "foreign accent".

[4] This was because the ancient Iranian literature is completely religious, and especially in Pahlavi, it is violently and aggressively sectarian. Another reason for this was that the western translators had failed to catch the true spirit of the ancient Avesta *Gāthās*.

§ 289. *Introduction of Western learning into India*

The work begun by Christian missionaries and by the various colleges started by Warren Hastings and others in various parts of India soon bore fruit. A new generation of English-educated Indians arose, who were profoundly moved by their contact with Western thought and culture. Some of these were utterly carried away by the Christian teaching, and broke away completely from their own ancient traditions and religion. Such were comparatively few in number; but their conduct aroused a corresponding opposition to all western learning among the orthodox. In its extreme form this orthodox opposition took the form of the dogma that all English learning was a "sin". This orthodox opposition still persists amongst the priesthood of all communities of India.[1] The teaching of English to women was banned by the orthodox till within living memory. Luckily for the progress of India the majority of the English-educated generation were affected in quite another manner. This new learning aroused in them a keen desire to find out the best that was in their own ancestral culture and to adapt it to modern changing conditions. Some of these were really men of far-seeing wisdom, and they became leaders of the country at this critical period of transition from the old to the new. Such leaders arose in every province and in every community, but their work was mainly confined to social and religious reform or to political awakening

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[1] An old Moslem gentleman opposed the teaching of English on the ground that instead of the name of Allah the language began with the names of d-o-g, c-a-t and p-i-g.

In the field of language, too, the effects of this new learning were very plainly visible. The Indian Press was born at Serampore in 1822, and the first Gujarātī paper in Western India, the *Mumbāinā Samāchār* (the Bombay News) was started about the same time. This last was a Parsi venture and it was followed some time later by the *Jām-e Jamshed*, which began its existence on the 12th of March, 1832.[1] In the wake of the Press was also born the modern prose literature of India. A more indirect, but a much farther reaching, effect of this was the encouragement all this gave to the study of the ancient classical languages of the land *from the new point of view* and to the spirit of criticism (often purely destructive) which crept into these studies. But in many cases these fresh oriented studies were constructive and led to wonderful results.

§ *290. Rājā Rām Mohan Roy (1774-1853)*

Fortunately for India and Indian scholarship the first Indian to show the way of this "new learning" was a great man in every sense of the term, great in learning and even greater in his character and the innate goodness of his heart. In spite of his imbibing to the full the learning of the West and in spite of his extensive travels "he lived and died a Brāhmaṇa tended by his Brāhmaṇa servant, and wearing his Brāhmaṇic thread".[1] He first read Persian and Arabic and then studied Sanskrit at Benares where he devoted himself specially to the study of the Upanishads and the Vedānta philosophy.

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[1] Both these papers are flourishing as vigorous dailies in Bombay today.

In 1790 he wrote a strongly worded treatise in Bengali on "Idolatry" which was the first work in modern Bengali prose. He next turned to the study of Buddhism and spent three years in the Himalayas and in Tibet. On his return to Bengal he began to study English. Soon after this began his real life-work. First came his translations into Bengali of the Upanishads (1816-17). In 1816 he founded with his friend Dwarkānāth Ṭhākur (Tagore),[2] the *Ātmīya Sabhā*, in which the principles which guided the lives of the two great founders were formulated.

Their inspiration was primarily from the Indian Scriptures, from the Sanskrit Upanishads, strengthened and supplemented by the teachings of other faiths. The *Ātmīya Sabhā* ultimately blossomed forth (in 1828) into the *Brāhma Samāj*,[3] or as it was called in the old days "the Hindu Unitarian Church." For the accomplishment of the great task Rām Mohan Roy read the Scriptures of all the great religions *in the original* and thus realised intellectually also what he had already known in his heart, the essential unity of all faiths. From its foundation the Brāhma Samāj united all the best intellectuals of Bengal under its banner. This led to the study of various religions, more particularly to the study of the ancient treasures of Sanskrit, the Upanishads and later on the Vedas also.

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[1] Frazer, *Literary History of India*, p. 403.

[2] He was the grandfather of the great poet Rabindranath Tagore.

[3] Or the Society of Believers in *Brahman*, the Supreme Spirit.

This revival of ancient learning was not confined to Bengal alone. In Bombay a very similar *Prārthanā Samāj* was started, which was the meeting ground of the best heads and hearts of Western India during the first half of the nineteenth century. During the last quarter of that century Swāmi Dayānanda Sarasvati, a Gujarāti by birth, started the *Ārya Samāj* in the Panjab. This has now become a great force in the life of the people of that province with the motto "back to the Vedas." All those activities inevitably led to a revival of the study of the ancient sacred language of India, and thus helped very argely the cause of Oriental learning, for the earlier members of all these three *Samājas* were all good scholars, and some even great scholars of Sanskrit.

Rām Mohan Roy united in his person "the old and the new" learning and with his wide outlook and by his devotion to the essential truths of religion he has left an example for all future generations to follow. He gave the correct orientation to scholarship and therefore he should be regarded as the "father" of all the intellectual movements that followed.

§ 291. *Sir Rāmakṛṣṇa Gopāl Bhāṇḍārkar*

Bhāṇḍākar has been the *guru* of many of the present scholars in India either directly or one[1] or two degrees removed, and he has certainly inspired all. He was undoubtedly the first in Western India to study "philology" according to the western methods. His *Wilson Philological Lectures* (1877) was the first great work by an Indian scholar in the western style. He was also a pioneer in teaching Sanskrit grammar according to purely western methods. How far he has been successful may be judged by the fact that his two books of Sanskrit are practically universally used all over Western India.[1] The present generation at school is perhaps the fourth or the fifth generation being taught Sanskrit under the influence of Bhāṇḍārkar. His fame, however, does not rest so much upon his grammar and philology as upon his very remarkable work in archaeology, epigraphy and ancient history. His pupils and admirers commemorated his eightieth birthday by founding in the year 1917 an Institute for research in his name at Poona. This Bhandarkar Oriental Research Institute has become now the most famous centre of Oriental learning in India and has achieved fame all through the world of learned men. It was in the fitness of things that the All-India Oriental Conference held its first sitting in this newly founded Institute and Bhāṇḍārkar blessed its efforts by becoming its first President.

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[1] As in my own case; I was trained in Vedic grammar by his eldest son, Prof. Shrīdhar Bhāṇḍārkar. Of course in Bombay I was trained rough his two books of Sanskrit.

§ 292. *The elder Indologists in India*

In Bengal Iśvara Chandra Vidyāsāgara (1820-1891) took the lead in reviving the study of Sanskrit. His grammar of Sanskrit (based essentially on the method of

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[1] These two books are widely used in western, central and southern India; and even in Germany. Their chief drawback at the present time is that they are based on the old and discarded methods of the older European grammars. And the language of these two books is a bit too intricate for school children.

Pāṇini) was in Bengali and was made as simple as possible for a beginner; it is therefore used extensively to this day all over eastern India. Against all orthodox opposition Iśvara Chandra helped to translate the "sacred" Vedic hymns into the "vulgar" Bengali. He also helped considerably in the production of Bengali literature and was himself a writer of great merit.

With the spread of the study of Sanskrit according to western methods there began also a study of ancient Inscriptions and of ancient Indian history. In fact most of the elder Indologists of India were primarily archaeologists and epigraphists and their contributions are to be found chiefly in the volumes of the *Indian Antiquary*. In these contributions we find a large amount of detail about the Middle Indian dialects and what might be called "Mediaeval Sanskrit," i.e., the Sanskrit of the Inscriptions, which is clearly in imitation of the later artificial *Kāvya* literature.

Of these workers Rājendra Lala Mitra (1824-1891) was among the older ones. He is well-known for his work on the cultural trends and influences in North India. He was a man of great learning and possessed a profound knowledge of many languages. His most famous work is a collection of essays in two volumes entitled *Indo-Aryan*.

Dr. Bhāu Dājī was a medical man by profession and an antiquarian by choice and out of pure love for the subject. He has written a large number of papers on all sorts of antiquarian subjects. He shows great critical ability and a deep knowledge of Indian Antiquities. His most notable achievement was the interpretation of "cave numerals."

It is not possible to speak of Dr. Bhāu Dājī apart from his colleague Pandit Bhagavānlāl Indraji (1839-1888).

He was an orthodox Brāhmaṇa of Junagadh and well trained in Sanskrit. He learned up enough English to be able to read it. Even as a boy he was attracted by the two great inscriptions at the foot of Girnār at Junagadh. He became the co-worker of Bhāu Dājī and his main work was the collecting and deciphering of inscriptions, coins and ancient documents from all over India. He was very careful in transcribing and very critical in translating inscriptions.

Although he possessed the training and the natural instincts of a true scholar, force of circumstances made Bal Gangādhar Tilak (1856-1920) a rather stormy political leader. It was during his enforced leisure while undergoing imprisonment for his political activities that Tilak found time to write his books. In his three books Tilak has shown his accurate grasp of the Vedas and of Hindu philosophy. In spite of some errors in comparing Sanskrit words with those of other Indo-European languages he has very ably sustained his thesis about the great antiquity of the Vedic hymns in his first important work, *Orion*. In this work he dates the Vedas as belonging to about the 5th millennium B.C.[1] (about 4500 B.C.). Such a statement was thought to be impossible and unbelievable when the book first appeared (1893), but the general trend of opinion has been slowly but surely veering round to Tilak's view. His second book is *The Arctic Home in the Vedas* (1903) and it is even more startling in its conclusions. In that work he has worked out a very fine correspondence between the Indian and the Iranian traditions on the subject. Tilak was given every facility for reading and study while in prison. It was through the large-hearted sympathy of Max Müller, and through his influence that this was made possible. It was Max Müller who sent him a library of learned works when Tilak was serving a term in the Rangoon gaol. His third great book was written in Marāṭhī and was entitled *Bhagavad-Gītā-Rahasya, athavā Karma-Yoga.* It is an original commentary on the Gītā suited to the political and social conditions of modern India. In many respects this last is the greatest of Tilak's works, for it has influenced the largest number of readers all over India. It has been translated into English and into most of the vernaculars of India. Still the original Marāṭhī possesses a beauty of its own.

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[1] This was the period when the Vernal Equinox occurred in the constellation of Taurus (more accurately in the *nakṣatra* Kṛttikā). Counting backwards in accord with the "Precession of Equinoxes" Tilak arrived at his date. At the present time (1948) the Vernal Equinox actually occurs in Pisces

The elder Indologists of our land confined themselves mainly to Sanskrit and to the Prakrits; none of them had thought of turning to the modern vernaculars and their growth. Narasiṃharao Bholānāth Dīvāṭiā was one of the first to do so. He was a poet of first rank in his native Gujarātī and an ardent lover of his mother-tongue. It was this love that led him on to study the ancient poets of Gujarāt, and thus he became the first historian of the Gujarātī language. Although he took up this work comparatively late in life, he was able to publish two volumes on the *History of the Gujarātī Language.* Narasiṃharao had no regular *training* in the modern methods of linguistic work and therefore some of his conclusions were regarded as of doubtful value by European scholars, while he himself was not able to appreciate fully some of the latest ideas put forward by them. Still Narasiṃharao commanded a mastery over his own mother-tongue, its numerous dialects and its literature (both published as well as unpublished) such as no western scholar ever did. Besides his own language he knew most of the other Indo-Aryan Vernaculars, and also had a good knowledge of Dravidian languages; and he was deeply read both in Sanskrit and Persian. He had trained a great many students and it is to be hoped that they will carry forward the work of their great teacher.

Though actually belonging to a much younger generation the name of Dr. Vishnu S. Sukthankar (1887-1943) has to be mentioned among the "elder Indologists" of our land because he was a pioneer in research work and in the scientific methods of pursuing knowledge. Graduating in Bombay he proceeded to Cambridge where he took the Mathematical Tripos.[1] Afterwards he spent some years in Berlin working under Heinrich Lüders.[2] He very eagerly and rapidly absorbed the teaching and learnt thoroughly the methods of Western research. On his return to India he soon came to the front as an accurate and a thoroughly critical scholar. When the Bhandarkar Oriental Research Institute started the great plan of a standard critical edition of the *Mahābhārata*, Sukthankar was appointed the chief editor, after some hesitation and a good deal of misgiving, chiefly on account of his youth. But very soon he proved that years did not count in this matter. The work of collating several hundreds of mss. of the *Mahābhārata*, scattered all over India, and even over several great libraries in Europe and America, was indeed an extremely heavy task. Yet Sukthankar evolved a very fine scheme of collation and during his lifetime he published four out of the eighteen *parvas* of the Great Epic. This "critical edition" is as perfect as the ingenuity of man could make it and it has already supplied material for research on the grammar and style of Epic Sanskrit. This great work brought Sukthankar to the forefront among the Indologists of the world, because the work was certainly worthy of the great and sacred land of his birth. Constantly working with the religious problems found in the *Mahābhārata*, Sukthankar developed an unsuspected and unexpected tendency towards mysticism in the highest sense of the term. The lectures which he delivered at the University of Bombay within a fortnight of his untimely and sudden death may be regarded as amongst the finest he had ever delivered.

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[1] Mathematics seems to be a very fine approach to accurate scientific work. This has been noted among some of the older "philologists" of Europe, Grassmann for instance. This is also the case with a number of our modern Indian scholars. Tilak was a first rate Mathematician.

[2] My own first meeting with Sukthankar took place in 1912 in the rooms of Heinrich Lüders at Berlin.

§293. *Iranian Studies among the Parsis of India before 1860*

The ancient Pahlavi commentaries on the Avesta texts represented the Sasanian ritualistic tradition, and when the Parsi emigrants arrived in India[1] they adhered faithfully and literally to these. About the beginning of the 18th century of Christ[2] Dastur Nairyosang Dhaval rendered much of this Pahlavi into Sanskrit. Nairyosang was a perfect master of Pahlavi, but "his Sanskrit lays no claim to being classical." The Pahlavi being a complex language to read, this Sanskrit of Nairyosang can be relied upon to give the true sense of the Sasanian commentaries.

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[1] I myself put the date of the arrival of the Parsis in India in the year 936 A.C. See my paper on this subject in the *Festschrift Prof. P. V. Kane* (Poona, 1941), pp. 506-514.

[2] This date has been disputed by some scholars. The whole lot of these Sanskrit translations has been attributed to Nairyosang, but they are really the works of different authors. All these have been published under the title of *The Collected Sanskrit Works of the Parsis.*

This Pahlavi tradition is a valuable guide for understanding parts of the Avesta. "With the mere knowledge of the Pahlavi translation the knowledge of the original is not achieved, but it often, very often, proves a finger post. At any rate it deserves everywhere to be listened to." With this Pahlavi commentary it is very much as with Sāyaṇa's commentary to the Ṛg-Veda. So long as Sāyaṇa was consulted only occasionally for this or that passage, he repelled rather than satisfied many. The result in the one case as in the other, was that a prejudice against the scholiast became a fashion among modern scholars. If we accustom ourselves to a systematic use of Sāyaṇa, and try to derive from him the practical sum-total of his aid, the original prejudice gives place to a growing appreciation. Similarly the Pahlavi translations and commentaries must be looked upon and digested *as a whole*, and, as a necessary preliminary, made more accessible and more intelligible to students before the last word can be said regarding them. There is, however, one important difference between this Pahlavi commentary and Sāyaṇa which must always be borne in mind, that the Pahlavi is probably the work of many hands and the whole probably extends over several centuries.[1] In essentials, however, the judgment upon its value passed by Hübschmann in 1872 still holds good in the main: "The gain will of course be various: abundant for the Vendidad, satisfactory for the later Yasna, but scanty for the Gāthās."[2]

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[1] *Grundriss der iranischen Philologie*, ii. p. 49.

[2] *Ibid.*, p. 51.

Anquetil du Perron got this Pahlavi tradition in its fullest and most unadulterated form through Dastur Dārāb of Surat.[1] But Dastur Dārāb of Surat was not the only custodian of this ancient tradition. In any case at the period of Anquetil's visit to Surat this Pahlavi tradition formed the *living* religion of the Parsis, and the ritual embodied therein was followed almost to the letter. The so-called "dark ages" of learning among the Parsis of India were not really dark; there were many learned Dasturs who had inherited the Pahlavi traditions *in unbroken succession* from the Sasanian days. They had, moreover, whole libraries of Pahlavi mss. in their possession. They assiduously studied these and tried to unravel the more difficult points of religion and ritual from these. In cases of doubt they wrote out these points in Persian and sent them for solution to their brother Zoroastrians in Iran, naturally believing that the people there had better knowledge or that they had preserved the traditions much better. These questions sent from India and the answers received from Iran are embodied in the *Revāyets*. These collections cover a period from about 1476 to 1773 A.C.[2]

A great figure in Iranian learning in India during the latter half of the 18th and the beginning of the 19th century was Dastur Mullā Fīrūz bin Mullā Kāus (1758-1830). An Irani Zoroastrian priest by birth he had inherited all the traditional learning of Zoroastrian priesthood of his days. He was regarded as a great authority by all on Zoroastrian

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[1] Of course there must have been a limit to Dastur Dārāb's own knowledge of Pahlavi. The possibility of Anquetil's misunderstanding the Dastur must also be considered.

[2] S. H. Hodivālā *Studies in Parsi History* (Bombay, 1920), pp. 276-349.

Texts and their meaning. He was also respected by Europeans for his learning, for he was their teacher in Persian. His chief contribution to Iranian learning was his publication of the *Desātir* (1818), which roused a violent controversy amongst the European Orientalists of the time.[1] He also composed a long Persian poem in the style of the *Shāh-Nāmeh*, in which was described the establishment of the British power in India. It was called *George-Nāmeh*, after the ruling British King, George III.

About the middle of the 19th century there appeared a Gujarātī[2] translation of the Avesta texts by Aspandiārjī Frāmjī Rabāḍī (1843). This was done at the request of the leaders of the Parsi community in answer to the virulent attack made by the Rev. Dr. John Wilson in his book on *The Religion of the Parsis*. Earlier in the century Dastur Behrāmjī Sanjānā of Bombay (1784-1857) had made valuable translations of ancient Avesta and Pahlavi works into Gujarātī. All these Gujarātī versions were entirely free from any European influence.

§ 294. *Kharshedjī Rustamjī Cāmā (1831-1909)*

K. R. Cāmā (or "Cāmājī" as he was affectionately called by all who had known him) was the father of modern Iranian studies in India. After completing his English education in Bombay he joined in his family firm and made business voyages to China and to England. He had been taking keen interest in all social and religious questions ever since his early youth, and so during his stay in Europe (1858-1860) he learnt both French and German and studied Iranian Languages and Comparative Philology under Professors Mohl and Oppert in Paris and under Spiegel in Germany. On his return to India in 1860 he started a private class for teaching Iranian Languages to Zoroastrian priests according to the latest methods of western "philology." He carried on this pioneer work for quite twelve years. Not only did he teach them free of any charge, but he actually helped their studies with books and money. No father ever did as much for his sons as Cāmājī did for the first batch of his pupils. All of these were fully worthy of their great teacher. They, in their turn, taught pupils of their own, and thus the "succession of teachers" (the *guruparamparā*) of Cāmājī has been maintained unbroken even to this day. Cāmājī had now no other interest in life except learning—both acquiring it and giving it out to others. He founded various societies for carrying out Zoroastrian and Iranian research, and by his own example he set others working. He read constantly and kept himself abreast of all the latest research.[1] In the depth and extent of his learning Cāmājī has remained unequalled among the Iranists of India. Owing to his learning as also to the true saintliness of his life, Darmesteter had called him "le Dastūr laïque" (the lay Head-Priest).[2]

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[1] See Browne, *Literary History of Persia*, Vol. I, pp. 53 and 56.

[2] Gujarātī translations from Avesta and Pahlavi had been made early by Parsi Dasturs in India. In fact the earliest specimens of Gujarātī prose are these Parsi translations. Some of these have been cited in the notes on the *Collected Sanskrit Works of the Parsis*. There have been several other Gujarātī translations of Avesta Texts before the one by Rabāḍī.

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[1] Cāmājī got nearly blind towards the end of his life, yet so great was his zeal for learning and his optimism that he started learning the Braille as a preparation for his blindness!

[2] Cāmājī was *not* a priest by birth but a *behedīn* (layman). *Dastur* (lit., he who holds the hand—and leads the disciple) is the name given to the Zoroastrian High-Priests. These are unfortunately a hereditary caste at present.

The new learning and the new interpretation of their Scriptures naturally gave a strong impetus to the English-educated Parsi "reformers" and Cāmājī was naturally their accepted leader. It was also inevitable that he should arouse the orthodox to violent opposition. But there was so much of "sweet reasonableness" in Cāmājī's nature that he disarmed most of his opponents. He remained a true Zoroastrian to the end of his life. He translated many books and papers on Iranian subjects from French and German into English and Gujarātī, and he gave out freely all that he had read in his innumerable lectures. His finest work is the *Zarathosht Nāmā* in Gujarātī, which is a life of Zarathushtra based exclusively on *Avesta* texts.[1]

Even if Cāmājī had not written a single work his place among the Iranists of India would have been secure on account of the pupils he had trained and by the impetus he had given to true scientific research in place of blindly following ancient traditions.

After his death one of his Hindu friends, Sheth Dāmodar Sukhaḍwala, offered a princely donation to commemorate his memory. Cāmājī's other admirers and his pupils added their mites to this, and from this was founded the K. R. Cama Oriental Institute at Bombay. Cāmājī's own private library was then transferred to this Institute. It has now become a good centre for research and for lectures on Iranian subjects. Later on the library of Dastur Mullā Fīrūz was also added to this collection, as also several other collections. Thus the Library of the K. R. Cama Oriental Institute has at present the finest collection of books on Iranian subjects in Bombay. This

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[1] The "traditional" life of the Prophet is based entirely upon *Pahlavi* works.

Institute was very ably managed from its start by Dr. Sir J.J. Modi, himself a devoted pupil of Cāmāji and after Modi's death the work was taken over by another devoted pupil of Cāmāji, Behrāmgor T. Anklesariā.

§ *295. The elder Parsi Iranists*

Dastur Hoshang Jāmāsp Jāmāsp-Āsā (1833-1908) belonged to the Poona branch of a learned family of High-Priests. In Poona, where he was a Professor, he had the inestimable advantage of close association with Martin Haug. His knowledge of Pahlavi was considerable and he was well up also in Sanskrit, Arabic and various other languages. He helped Haug in the search for mss. Dastur Hoshang himself had inherited a considerable mss. library to which he had added by his own search for mss. He was associated with Haug in editing several important Pahlavi Texts.

Dastur Jāmāspji Minochehrjī Jāmāsp-Āsā (1830-1898) was a learned priest of Bombay. He belonged to a family among whom ancient Zoroastrian learning was a cherished tradition. He was a distant relation of Dastur Hoshang of Poona. With his inherited family learning he had also inherited a valuable collection of mss., of which he made very good use during his lifetime. In 1866 he deciphered the two Pahlavi inscriptions in the Kanheri Caves near Bombay. Himself trained in traditional learning he still took very keen interest in the new methods of approaching Iranian languages, and with a number of younger scholars he edited some important Pahlavi texts. He has also compiled a Pahlavi Dictionary in four volumes.

Dastur Peshotan Behrāmjī Sanjānā (1829-1898) was High-Priest of the old traditional type, and his family also had a long inherited tradition of learning. He succeeded his father, Dastur Behrāmjī Edaljī Sanjānā, as the Head of one of the largest of the Bombay Fire-Temples. He wrote in Gujarātī mainly. His Grammar of the Pahlavi Language (1871) is a fine work full of quotations from mss. till then unpublished. He also edited many Pahlavi works with Gujarātī translations. The most important of his undertakings was his edition of the Pahlavi *Dēnkart*, of which only nine books have survived.[1] The first two of these books have never been discovered. Dastur Peshotan edited the third, fourth and the fifth during lifetime. Dastur Peshotan's writings on Pahlavi showed that he possessed "as competent a knowledge of that complicated language as any contemporary writer possessed. In most cases he has been the most advanced pioneer in his translations, well in advance of grammars and glossaries."[2]

Dastur Dārāb Peshotan Sanjānā (1857-1931) was his son and he inherited all the great learning of his father, to which was added modern learning as well. He succeeded his father as Head-Priest of the Fire-Temple and he was also Principal during many years of the two seminaries (*Madresās*) of Bombay for teaching Avesta and Pahlavi. His numerous English writings and essays were collected in one volume after his death. His most important service to Iranian studies was his completing the great edition of the *Dēnkart* which had been begun by his father. Dastur Peshotan had published the first volume in 1874 and Dastur Dārāb brought out the last volume (XIX) in 1928.

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[1] The *Dēnkart* was composed at the express wish of the Caliph al-M'amūn (811-833), because he wished to know about the beliefs of his Zoroastrian subjects.

[2] See the biographical notice by E.W. West in the volume of *Studies* published in honour of Dastur Peshotan after his death.

Kāvasjī Edaljī Kāngā (1834-1904) was a priest from Navsari, and was among the first batch of Cāmāji's pupils. He did very splendid work in Avesta. For he translated all the Avesta texts into Gujarātī, compiled an *Avesta Dictionary*[1] as also an *Avesta Grammar* in English. Of his Gujarātī books the *Khordeh-Avesta bā Māenī* (1st edition, 1880) contains the Text, in Gujarātī script, of all the important daily prayers together with a word for word Gujarātī translation and explanatory notes. It is extremely popular amongst the Parsis, who use it for their daily prayers. It has passed through ten editions up till now. His second work in popularity (as also in utility) is the *Gāthā bā Māenī* (1st edition, 1895), which deals with the *Gāthās* in the same way, and has passed through five editions by now. Though a good amount of new research has been accomplished since Kāngā's days still his translations have an appeal for Zoroastrians, which no European translator can achieve. The reason for this is that Kāngā *lived* the religion whose Scriptures he translated and he had put his *heart* as well as his head into his work. He has followed almost wholly the standard text of Geldner, and his chief authorities are the older Iranists of Europe like Spiegel, Justi, Darmesteter, Harlez and Mills. Kāngā was for many years Principal of the Mullā Fīrūz Avesta-Pahlavi Madresā at Bombay.

Tehmurasp Dinshāhjī Anklesariā (1840-1903) was another of the great pupils of Cāmāji. His special strength was in Pahlavi and he was thoroughly at home in Sanskrit also. He too was a practising priest like Kāngā. He used to teach Sanskrit at the Madresā. His collection of Pahlavi mss. was remarkably fine. From these he collected fragmentary quotations in Avesta (apparently from the Texts now lost), and published them. These are known as the *Tehmurasp Fragments*. He was particularly anxious that Zoroastrian priests should read their Scriptures in the original Iranian script, not in the Gujarātī transcription. For that purpose he started a printing press of his own for which he cast special Avesta and Pahlavi types. In this Fort Printing Press he printed many valuable texts and editions. This work of printing was carried on by his sons after his death.[1]

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[1] This is the only Avesta-English Dictionary yet available.

Behrāmgor T. Anklesariā (1874-1944) was a son of Tehmurasp, and he inherited together with his father's splendid collection of mss. also his great learning. Besides the training he got from his father he also had the great good fortune of working under Cāmāji himself. Though born a priest, Behrāmgor was never ordained because he had deep-rooted and conscientious objection against certain priestly practices. In Pahlavi learning Behrāmgor certainly had no equal, probably in the world, and he always kept in touch with the latest researches in Europe, because he could read fluently both French and German. He edited a number of Pahlavi texts. He succeeded Dastur Dārāb Sanjānā as Principal of both the Bombay Madresās. He was an indefatigable worker; but in spite of his unequalled learning he was not sufficiently appreciated in his lifetime. This was because he was a man with very strong notions of his own and never minced his words when dealing with sham scholarship or cant. The one thing he could not learn from Cāmāji was the latter's "sweet reasonableness."

Sheriārī Dādābhāi Bharuchā (1842-1915) was yet another of Cāmāji's priest-pupils and in some respects the greatest of them all. He also was a teacher in the Sir Jamshedji Jijibhai Avesta-Pahlavi Madresā. He was a profound Sanskrit scholar, the best among the Parsis of his time. His chief work was that of a reformer, and being a priest he suffered much at the hands of the orthodox. He compiled *Lessons in Avesta* and *Lessons in Pahlavi* (each in three parts) modelled more or less on Bhandarkar's two books of Sanskrit and he also compiled a very useful *Pahlavi-Pazand Glossary*. He wrote copiously in Gujarātī in which his most notable books are the *Rīstīstān* and the series for school children called the *Zarathoshtī Dharma-Nīti*. The former gives a detailed account of the teaching about death in Zoroastrianism, as also the ceremonial for the dead and is even to-day the most authoritative work on the subject. The latter series of books (seven in all) have helped a great many of the older generation (including myself) in getting a very clear idea of the Zoroastrian religion. It is an admirably graded series exactly meant for a growing child. Bharucha also edited the *Collected Sanskrit Works of the Parsis* in five parts[1] with copious annotations and scholarly introductions. He left behind at his death a large number of essays and a very fine rendering of the *Gāthās* in Gujarātī. Some essays were published at intervals after his death. But his Gujarātī rendering of the *Gāthās* still exists in manuscript form only.

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[1] Unfortunately the Press was completely destroyed by a fire in the year 1945.

Dr Sir Jīvaṇjī Jamshedjī Modi (1854-1934) belonged to a younger generation of Cāmājī's pupils and he was one of the most deeply devoted pupils of that great teacher. He was a man of vast reading and wide tastes. He always managed to keep abreast of the latest research

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[1] Part V was published after the death of Bharucha and was edited by the late Mancherji P. Khareghāt, I.C.S. (retired). Part VI is in mss. form as yet and will be published at the earliest possible opportunity.

(especially Iranian). He wrote copiously and was an untiring speaker. He has edited several Pahlavi texts. He has also travelled extensively over Europe, Asia and North Africa and has written racy accounts of his travels. He never stirred out without a note-book in which he jotted down anything interesting he saw or heard. In this way he acquired a vast amount of out of the way information. His writings, though not quite "scholarly" in the strict sense of the term, are always full of strange information on the subject of race-contacts, cultural influences and kindred topics. His learning was recognised by the learned circles in India when he was elected President of the Fourth All-India Oriental Conference held at Allahabad in 1926. Jīvaṇjī Modi was invaluable in "popularising" the results of Iranian research, for he had a natural gift of putting scholarly subjects in a form easily grasped by the man in the street.

Sohrāb Jaṁshedjī Balsārā (1878-1945) belonged to the "second generation" of Cāmāji's tradition, inasmuch as his teachers were Kāngā and others of Cāmāji's first batch of pupils. A very quiet and unassuming man he did good solid work, living practically as a recluse in his small cottage far from the city of Bombay. He possessed deep religious sensibilities and was a very ardent lover of Ancient Iran and her Culture. These tendencies have unconsciously coloured all his work. He has edited two of the admittedly difficult texts—the *Nirangistān* and the *Mādigān-ī Hazār Dādēstān*. He also wrote numerous papers on Iranian Religion and Culture. He was also the author of an exquisite little book on the *Religion of Zarathushtra*. In all his writings and in all his personal contacts he was ever "sweetly reasonable."

§ 296. *Modern Tendencies in General Linguistics*

The modern tendency in Linguistics is to carry forward the work started by the Junggrammatiker. Fresh discoveries in psychology and the workings of the human mind have led on to newer theories in the field of language study. The main tendency today may be characterised as *regarding language as the expression of the living mind*, not as a mass of grammatical and phonetic forms and facts. In this regard the French, with their intuitive brilliance have been the leaders.

A. Meillet might in some respects be called the leader of this modern movement in linguistics. "The most philosophical of linguists," his writings cover every field of Indo-European as well as General Linguistics, and "are remarkable both for their breadth of knowledge and the import of their conclusions." He has written *Linguistique historique et linguistique générale*, *Introduction á l'étude des langues Indo-Européennes* and many monographs on practically every branch of I.-E. languages. In collaboration with J. Vendryes he has published a *Grammaire comparée des langues classiques* and with Marcel Cohen he has edited the encyclopaedic work, *Les langues du monde*. In Iranian Meillet has produced a *Grammaire du vieux Perse* and his famous *Trois conférences sur les Gathas*. He was a recognised authority on Armenian as also on the Slavic languages.

These modern writers on linguistics make their works very interesting and even thrilling. For instance the book of Vendryes on *Language, a Linguistic Introduction to History*[1] is one of the most remarkable books ever written on this subject. In it the author considers language as "the social fact *par excellence*, the result of social contact." It is a real social creation. He shows that language has been a factor in human evolution as much as the hand has been; "it is because man is *homo faber*, but more because he is *homo loquens*, that he is *homo sapiens*."[1] In dealing with the development of grammatical ideas he establishes "in the spoken language the existence of the spontaneity that always surrounds and colours every expression of thought, and renders grammar unstable". In short his thesis is that language is a natural outcome of life and that life having produced it continues to nourish it. And this "indomitable force of life" triumphs over rules of grammar and breaks the fetters of tradition. Hence, he maintains, "it is not altogether unreasonable that there are as many languages as there are speakers," for it is the living mind of each speaker, and not the words he utters, that is embodied in what we call "language." And because of the necessities of social life among human beings some kind of unifying tendency is observed among a group of people and "equilibrium is re-established."

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[1] The original work was in French and formed one of the volumes of a projected "History of Civilisation." The English translation was published in 1925.

O. Jespersen is another of the great modern writers on general linguistics. One of his earliest works was a very readable grammar of the English language entitled *Growth and Structure of the English Language* (1905). This was followed in 1907 by *Progress in Language with special reference to English.* Jespersen has been Professor of English in the University of Copenhagen and has contributed a large number of papers on the various aspects of English. His book on *The Essentials of English Grammar* 1933) is one of the finest grammars of that language.

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[1] Vendryes *Language*, Foreword (by Henri Berr), p. xvii.

His first considerable contribution to general linguistics is his book on *Language, its Nature, Development and Origin* (1922), a very readable and extremely interesting work. Its chief importance lies in its treatment of "baby-language", and it forms a most valuable contribution to the Science of Language. This work was followed by *The Philosophy of Grammar* (1924), wherein he has tried to establish the main principles of language growth and of syntax. He has also compiled *A Modern English Grammar on Historical Principles* in four parts, three of which deal with syntax. He has also written a small book on *A System of Grammar* dealing with general grammatical fundamentals. His book on *Analytic Syntax* (1937) is in many respects very remarkable. In it he tries to reach the fundamentals of syntax, not of any particular language as such, but he tries to give us the fundamentals of "the unit of language" as such.

Daniel Jones did very good and useful work in "experimental phonetics." In England at any rate Jones has been the pioneer in accurate and scientific study of sounds of the human voice. By means of accurate instruments the University of London has successfully recorded the greater part of the languages of Europe, and at the London School of Oriental Languages many of the languages of Asia and Africa have been similarly recorded. A remarkable work of Daniel Jones was his *English Pronouncing Dictionary* (1917) which attempts to record in "the international phonetic script" the standard pronunciation of English, the so-called "public school pronunciation". Jones had also trained many Indian students who have been carrying out fairly efficiently the phonetic investigation of the various languages of India in the modern scientific manner. For this purpose the International Phonetic Script has been found most useful.

§ 297 *Indian and Iranian studies today*

In the earlier days in Europe the expression "Oriental studies" meant mainly and almost exclusively the study of Sanskrit. In those days we find many "Indologists" and a few "Iranists" in the narrower sense. As newer discoveries came to light especially the wonderful finds in Central Asia about the beginning of the present century, the idea of a "pure" Indologist or a "pure" Iranist has steadily receded in the background. This has certainly led to a sort of "eclipse" of "pure" Iranian studies and we may almost assert that since the death of A.V.W. Jackson there is not a single "Iranist" in the old exclusive sense left in the West. Of course, ever since the days of Bopp's Comparative Grammar every Indologist was bound to study something of Iranian languages, just as every Iranist was obliged to study some Sanskrit. But even then most of the scholars in the early days confined themselves to an intensive study of the facts concerning either the Indian or the Iranian branch. The opening up of the Central Asian antiquities first gave the idea of "Greater India" (*Bṛhad Bhārata*) and of the extremely wide-spread extent of the "empire of Indian Culture". Similarly Iranian Culture was proved to have had an equally extensive "empire". This also brought out the idea that these two great cultures, which were essentially but the two branches of one original "Aryan Culture", had been inextricably mixed up all through the centuries of recorded history.

In India both Indian and Iranian studies have flourished since the middle of the 19th century. Still, even today, there is a tendency, both among Hindu as well as among Parsi scholars, to think of their special studies as if they were confined in watertight compartments. There is also the rather deplorable tendency to regard their own special branch as the original source and the other as having borrowed wholesale from it. It is this tendency mainly which has made the Western scholars belittle much of the work done in India as "uncritical" and "untrustworthy."

A great many valuable details about the ancient history of Asia have come to light during the past half century or so. Many scholars in the West have begun a fresh synthesis of all this new material and have given an entirely fresh view of the history of Asiatic culture. This way was shown by the versatile Sylvain Lévi, whose long life might be regarded as a link connecting the earlier and the modern European Orientalists. Lévi certainly gave to Indian scholars the first impetus towards a larger synthesis and taught them how the history of Asiatic culture was to be approached.[1]

Linguistic Science has, ever since the time of the Junggrammatiker, taken greater account of matters other than purely phonetic or grammatical. The emphasis in the days of the Junggrammatiker was upon the psychological aspect of language. That emphasis has not been slackened today, but another aspect of language is being stressed more and more today, and that is the *cultural*. Language should be studied not so much as *language*, but as an expression of human progress. This aspects is clearly emphasised by Vendryes and other modern writers and even "specialists" seem to have caught this spirit. Thus Linguistics has now come to be recognised as a "cultural" subject worthy of study by itself and not as a mere adjunct to the study of 'classical' languages.

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[1] See also Baily, *The Content of Indian and Iranian Studies*, pp. 18-19.

As a necessary corollary the study of Linguistics certainly requires a fair amount of knowledge of ethnology, history and kindred subjects; and thus a true student of the Science of Language should try to become "Jack of all and Master of One".

§ 298. *The trend of Linguistics in India today*

Regarding the main tendencies of this new movement in India a few indications might be given and these would also indicate roughly the direction of our future work.

In the first place, like our European teachers, we should work out the problems of the growth and history of our Vernaculars. Of late years a good deal of valuable work has been accomplished about the languages of Northern India extending from Assamese westwards up to Awadhi, and a great deal of hopeful activity is also visible among scholars of Dravidian languages. Schemes of standard Dictionaries have also been proposed and many have already been published. In this respect we have the excellant model of Turner's *Nepāli Dictionary.*

The Pandit and Moulvi of the old style would not even look at the Vernaculars and the majority of the modern English-educated Indians did not think any Vernacular worth the trouble of learning The result has been that until quite recently all important work on Indian Vernaculars had been done by *European* scholars. Quite apart from any "national" bias we want our Vernaculars studied and developed scientifically. The Universities in India now seem to be alive to the importance of this subject. There is a cry everywhere now for dropping the shackles of English. But we must beware against the extreme view of doing away with English altogether, and of replacing modern linguistic teaching by the old tradition of Pāṇinian grammar. In any case our Vernaculars have come into their own and their position in our future educational system is certainly assured, but still it would be a great mistake to discard English altogether. India needs English in order that she may once again gain her position among the free nations of the world.

A fresh "Linguistic Survey of India" is very necessary. All honour to Grierson for showing us the way. But the shortcomings of his Survey might be avoided. Above all the plan should be carefully thought out in every detail and there should be very skilful co-ordination. The tendency to a narrow view point (provincial or communal) is the biggest danger to avoid at present. All this would demand an army of well-trained workers who are prepared for years of drudgery and uninteresting work.

The study of the anthropology and the ancient history of India must receive full emphasis. Only thus would linguistic work be of any value. Language divorced from the human beings who speak it, or spoke it in the past, is but a dead thing; but considered as a part of human history it is of the deepest interest. The time has come to emphasise the *human* aspect of language rather than merely the formal and grammatical aspect as had been done so far.

The study of the living languages of India has to be supplemented by an intensive study of the "classical" languages, of both Hindu and Islamic cultures. Among these should be included, besides Sanskrit and Arabic, also Pali, the Prakrits and Persian. The old idea that all our modern Vernaculars are "daughters" of Sanskrit and that Urdu is "descended" through Arabic and Persian must be got rid of. The Iranian languages which are the "classics" of the Parsis should not be forgotten. In short while considering any language of India (whether Classical or Vernacular) we ought never to lose sight , the varied cultures it embodies.

At the present time there is special importance attached to scientific, technological and commercial training all over India, and the study of "classical languages" is regarded as unremunerative. Besides the older methods of teaching these languages are such as might repel the average student today. They are treated as languages which are "dead" or at any rate as languages which are of no use in life. The very important point is always forgotten that these languages were at one time *living* and they served for the daily needs of men in the bygone days. Two of the "classical" languages mentioned above are by no means "dead," Arabic and Persian. But unfortunately they are taught in our schools and colleges just as if they were dead.

India presents in miniature every problem which agitates the modern world. For the student of comparative religion and folk-lore no better field can be found than in India. Religion touches the deepest chords in man's being, and so an understanding of the religious ideals of the various communities is also necessary for our scholars. Our 'classical" languages divorced from the religions they embody would not be much worth studying.

There should also be a consideration of the effects of foreign influences in India. From the earliest days outside influences have been working on India, specially on the north-east and the north-west frontiers. With the advent of Islam these foreign influences penetrated right into the heart of the country and influenced the thought and the languages of India profoundly. Of course these Islamic influences took longer to penetrate into South

India. Islam, however, became Indianised, and thus its influence was the greatest of all. Islamic influence has penetrated deep into every department of India's life and thought. Today we see the influence of the West, especially of England. This also has penetrated our life through and through. It has completely revolutionised our ideas and has been the most powerful factor in our present awakening. There has been a "Divinity that has shaped our ends" in India. Many of us believe that this end is to be the re-establishment of our land in the position she occupied in the remote past, a position which her culture and her achievements have given her a right to assume.

APPENDIX A

THE LANGUAGE PROBLEM IN INDIA

The most usual remark made by foreigners regarding India is about the multiplicity of languages spoken here. In doing this the foreigner thinks in terms of his own land, which is, in most cases, much smaller. When we deal with the language problem of India the first thing we have got to remember is that India is not a small country but a subcontinent. Her extent is equal to that of Europe *minus* Russia; and her peoples and their history, too, have been as varied as those of Europe. Consequently we should enumerate the languages spoken in Europe (*minus* Russia) before we begin to wonder at the multiplicity of languages here. I advisedly use the word "languages", not "dialects". If we count the dialects of Europe, as they have been counted in the volumes of the *Linguistic Survey of India*, there would not be any very great discrepancy in the numbers. Of course Europe has an advantage in being far richer in means of communication and in having a much wider extension of literacy for both these tend to the minimising of dialectical differences. In India the want of facilities for communications and the extensive forests and mountainous regions on the north-east and north-west frontiers are to a large extent responsible for the very large number of dialects enumerated in the volumes of the *Linguistic Survey of India*. In fact by far the greater portion of the dialects mentioned therein belong to forest tribes and the aboriginal inhabitants. And of these languages a fair number are spoken by a few thousand and some even by a few hundred people. Thus the *Linguistic Survey of India* has been made very complete indeed; but it is apt to mislead a stranger at first sight regarding the linguistic condition in India.[1] Of the 854 languages and dialects enumerated therein 284 belong to the aboriginal and the Tibeto-Burman people of the Himalayan valleys. Of the remainder, 46 are Dravidian, 48 Iranian and 36 Dardie. Among Indo-Aryan languages Grierson has mentioned 17 'language' and 345 'dialects.' Over 60 have less than a thousand speakers. Among 'dialects' have been enumerated argots, tribal dialects and even 'cast dialects.' In some cases the number of speakers is given as 30, 25, 20 and even 14! Naturally all these swell the numbers and give an entirely false notion of the multiplicity of Indian languages.

To demonstrate that the languages of India are by no means more numerous than those of Europe (excluding Russia) we have only to enumerate the principal languages in both these areas.

In India (*including* Ceylon and Burma) we have:—

(*a*) sixteen languages of the Indo-European family:

Urdū, Hindi, Maithili (or Behārī), Bengali, Assamese, Oriya, Marāthi, Singhalese, Sindhī, Panjābi, Nepālī, Mārwāṛī (or Rājasthānī), Gujarātī, Persian, Balōchī, Afghan (or Pashto);

(*b*) four of the Dravidian family:

Tamil, Malayalam, Telugu, Kanarese;

(*c*) two of the Monosyllabic family, Tibetan and Burmese.

In other words there are 22 principal languages in all.

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[1] See Appendices I and I-A of Vol. I of the *L.S.I.*

In Europe over a similar area we have:—

(*a*) eighteen languages of the Indo-European family:

English, Dutch, German, Swedish, Dano-Norwegian, French, Spanish, Portuguese, Italian, Rumanian, Greek, Albanian, Irish, Welsh, Polish, Czech, Servian, Bulgarian;

(*b*) four of other families:

Hungarian, Finnish, Turkish and Basque.

These make up 22 in all.[1]

The number of languages in each of the two areas is thus seen to be substantially the same. And as regards diversity of languages, India is distinctly in a better position than Europe, inasmuch as the Indo-Aryan languages are so close to one another that with a little effort they are mutually understandable. In fact no two Indo-Aryan languages differ as much as English and German. There are, besides, the great unifying influences of Sanskrit and of Sanskritic (Hindu) culture, which bind the Aryan languages even closer together, and even draw the Dravidian languages within the "cultural pale" of the Indo Aryan.[2]

Language and religion are the two great bonds of human unity. All the principal provinces of India possess both these in a very real sense. The diversity of the languages of India is more apparent than real; and in fact there is greater linguistic unity in India than is discoverable in Europe. The essential unity of the major Indo-Aryan languages is quite clear to the trained linguist. But it is also capable of being appreciated by a person of average intelligence even though untrained. The proof of this statement is to be found in the fact that all the big cities of India are bilingual and sometimes even trilingual in the sense that two or even three languages are understood by a greater portion of their people, even by the so-called "illiterate." In Bombay, for instance, three languages are prevalent: Marāthī, Gujrātī and Hindōstānī, in Calcutta we find Bengali and Hindōstānī, in Madras Tamil and Telegu, in Nagpur Marāṭhi and Hindī, in Karachi Sindhī and Hindōstanī and so on. Quite a large number of educated people in India today can read, write and speak half a dozen of our Indian vernaculars and any one who tries shall find that he can do so quite easily.

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[1] I have not counted here the lesser 'national' languages like Croatian Lithuanian, Lettic, Flemish, etc. even though they possess literatures.

[2] Many years ago there used to be published a magazine, called the *Devanāgara*, which contained articles written in all the Aryan as well as the Dravidian languages of India. These were all printed in the Devanāgarī script. It was a revelation how much a person of average intellect, educated in only one vernacular, could understand in every one of those articles.

When we consider the *literatures* embodied in these languages (viz., the Indo-Aryan and the Dravidian) the unity observable is even greater. The fountain head of all Indian literature is Sanskrit. The same tales are recounted and the same sentiments are echoed throughout the length and breadth of India, very often in identical phrases.

Of course, the Islamic culture stands a bit apart. Still it is not so very different as is often sought to be made out for political propaganda. Much that is of value in Islam is Iranian, as embodied in Persian; and this being an Aryan language embodying Aryan ideals it can be assimilated to the Sanskritic without any great difficulty.

In the old days—say a century ago—Indians did not appreciate their essential unity to the same degree as they do at present. At that time a man going from Bombay to Nagpur or from Calcutta to Delhi would talk of going to "a foreign land" (*paradeśa*). But today the spirit is very different when all India is thrilling with the new feeling of national unity.

This is not the place for political or constitutional discussions. But we must admit that the political struggle in India during the last half century has had its repercussions in the linguistic field as well. In a sense this political struggle has brought about a linguistic awakening as well. Side by side with the growing pride in the past of our land there has come also a pride in our vernaculars.[1] Recent years have seen a renaissance of every literary vernacular of India. The present generation of students have been taking as much pride in their knowledge of the mother-tongue, as their fathers did in their mastery of English. There is a distinct movement in every centre of education to give to the mother-tongue its rightful place in the life and education of the people.[2] Coming as it does at the end of a century and a half of domination by the English language in all walks of life, this new movement has led to a good deal of confusion, and has set all our older educational authorities shaking their wise heads with doubts as to the advantages of emphasising the vernaculars.

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[1] When Indian Vernaculars were first introduced in the M.A. of the Calcutta University, the late Sir Asutosh Mookerjee insisted upon retaining the word "vernaculars" instead of the more usual "languages." "We should take a proper pride in our vernaculars" was his advice to us on that occasion. The great poet of Gujarāt, Premānand, had also great pride for his vernacular. He had vowed to make his beloved Gujarāti as great in literature as Sanskrit, and he lived to carry out his vow.

[2] This would surely give a far better chance to the *women* of India, who certainly have proved themselves more loyal to their ancient Aryan heritage than their brothers.

Apart from this confusion there is yet another confusion caused in practically carrying out a policy of vernacular education in our Universities as at present constituted. Many of our Universities command such an extensive area that there are several important vernaculars whose claims have to be considered. And it becomes a very difficult *practical* question for a University to carry on education, as well as to examine, in half a dozen vernaculars in all subjects. The only possible solution of this seems to be the creation of "linguistic universities," and each province to-day might possess by one or more universities as needed. The Moslem state of Haiderabad has already very successfully carried out this plan in the Osmania University which carries out its whole programme in Urdū. Such Universities would give great impetus to the cultivation and scientific investigation of each of the principal languages of India, and would go a long way in restoring our pride in the great treasures of our vernacular literatures.

The next aspect we have to consider is the "interprovincial" aspect of the question. This may also be called the "national" aspect. The whole matter is closely bound up with many of the vexed political questions to day. India is just now passing through a phase of deep national fervour. This has implied the need of a national language as much as that of a national flag. This question of the national language had been, in a way, solved ages ago, when the "language of the camp"—Urdū—was born. I, however, prefer to call it *Hindōstānī* for several reasons. In the first place this name embodies the name of our land, in the second place it avoids the clash (inevitable when communal feelings are running high) which either of the terms "Hindī" or "Urdū" might evoke. Unfortunately a great deal of misunderstanding has gathered round the question of Hindī-Urdū. It has never been discussed, as it should have been, from the purely linguistic (and hence scientific and dispassionate) point of view. Instead of looking at it in this manner, men have tried to make political and communal capital out of it. The national language is a question of national importance and as such it must be discussed dispassionately.

The Moslem conquerors brought with them the Persian language[1] and Persian-Islamic culture, both of which enriched the life of our country. As the language of the conquerors Persian began to be eagerly studied by those who wished to serve the government or to have other dealings with the foreigners, much as English had been studied until now. The common people also began to have a smattering of Persian and in talking with their Persian-knowing masters they began to intersperse there own speech with words and phrases of Persian they had picked up. This resulting language was a mixed language, Persian vocabulary superposed upon the Western Hindī[2] grammatical structure; and it was rightly named "Urdū", the language of the camp and the bazar. The words are mainly Persian and Arabic, but the sentence construction, the morphological endings and the pronouns are all Indo-

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[1] By that time Irān had fallen under the strong domination of Arabic, for the latter was the language of her new religion Islam. This Arabicised Persian thus represents a blending of Semitic and Aryan cultures.

[2] This is the language of the country round about Delhi and Meerat.

Aryan (Western Hindi), and thus the language is essentially one of our own Indian languages.[1]

This mixed tongue, which I have called Hindōstānī[2] is now recognised all over India. Islam has made a home in this land so long that it has penetrated to the remotest corners and in consequence the Irano-Arabic vocabulary of Hindōstānī is more or less easily understood in almost every village. So here we have a language ready for use all over India. But—and it is a big "but"—beyond the ordinary needs of daily life (e.g., food, dress, ordinary business, etc.) this language ceases to be intelligible to the masses. When we wish to speak of any of the higher and cultural subjects (like history, art, politics, science, religion, etc.), we do find the language splitting up into two clearly marked divisions. These are distinguished by their vocabularies only, and according as the speaker has imbibed Islamic or Hindu culture they are called "Urdū" or "High Hindī" respectively. This constitutes a very real, and indeed, a very formidable, difficulty in the way of finding a common factor for the national language. The present moment, however, is not exactly propitious for finding the solution, because the whole question is vitiated by the political aspect of the Hindu-Moslem controversy. But this does not mean that a solution is impossible. As soon as a political settlement is agreed upon and the two Dominions have settled down to work out its own future in their own way. There shall be discovered innumerable points of contact between these two apparently opposed ideals, and as soon as that state is reached, it is merely a question of time and of mutual accommodation before we get a full-fledged national language.

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[1] The language used commonly by college and school students in India to-day is a similar mixture of English words superposed on their own vernacular sentence construction. Thus, 'Monday ना concert मां तुं मने accompany करजे" or "आमार professor बड़ genial and kind-hearted man आछेन"; or "watch पाहिला तो half-past-ten time होता, आमची train miss झाली" । These sentences are no more English than Urdū sentences are Arabic or Persian.

[2] In Bombay it is usually called "Musalmāni" on account of its Islamic vocabulary.

The late Nagendranath Gupta in an article on "A National Literature for Hindustan"[1] has spoken of the desirability of establishing a "national literature" in Hindōstānī, the language "placed between two religions". He adds: "Hindustani,[2] rich already with the spoils of the beautiful and sonorous language of Hafiz, is at perfect liberty to borrow as largely as it pleases from the treasures of Sanskrit and English......If Hindu and Muhammedan scholars were to think together, each striving to supplement the work of the other, and if gifted men were to utilise the results of their study of the English language for the development of their own literature, Hindustani would rapidly gain the position that properly belongs to it."

In the domain of song and of the "talkies" this national language is clearly coming into its own. Every lover of Indian music and every "cinema fan" all over India understands this Hindōstānī quite well. The radio also has been helping in the same direction. And just because this cannot be the highly arabicised Urdū of Lucknow and Haiderabad nor the highly sanskritised Hindī of Benares, we should call it by the "neutral" name "Hindostānī". I personally think that if the propagandists of a national language were to adopt this name nstead of "Hindī" (which they usually do) they would disarm much of the Moslem opposition at once.

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[1] *The Hindustan Review*, July, 1946.

[2] The author obviously means the high style of Perso-Arabic Urdu here.

The script to be used for this language is another important consideration. Here we touch upon some of the deepest emotions of human beings, because the scripts of Urdū and Hindī are those of their respective Scriptures. It is a very dangerous matter to wound religious sentiment and it is impossible to reason with people who are moved by religious sensibilities. There are two alternatives open: (*i*) that *both* the scripts may be learnt and used[1] or (*ii*) that the international phonetic script be introduced. The first alternative seems to be more feasible just at the present moment, when the tide of national fervour is running high. The second alternative is certainly more in consonance with modern scientific requirements, but here again we are faced with ***sentiment***, where dispassionate reasoning is of no avail.[2]

Now remains the question of English. The position of English in the world to-day has been considered by me elsewhere,[3] and here we may accept the conclusion reached there that English is rapidly attaining the position of "world-language". We Indians have been learning English for well over a century, and to a great many of us the language is practically a second mother-tongue. As a matter of fact a good proportion of the older generation have not learnt their mother-tongue quite as thoroughly, and they even *think* in English. In short, we may be justified in asserting that English has made a home in this land and that in the very near future the language will be studied and used here far more extensively than at present. Our political and national movement owes its first inspiration to the study of English and of English Literature. And to-day even at the height of national fervour many of our nationalist journals are printed in English and in our national and provincial councils most of the business is carried on in English. The recent renaissance of our Vernaculars has certainly led to the use of these in the provincial councils, but in inter-provincial matters English is used much more than Hindōstānī because a large number of people outside the Hindī-Urdū areas of northern India know and speak English better than Hindōstānī. There is besides the vital question of making our aims and aspirations known, to the British and to the world at large. Thus English has had already a start—and a good start—in the race for becoming the "second language" for educated India. National sentiment calls loudly for Hindōstānī no doubt, but a dispassionate consideration tends to show that English is going to be the winner in this race. Even then there shall be room enough for Hindōstānī as the future language of inter-provincial communication; still we must admit that English is bound to occupy a high position.

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[1] All schools in the United Provinces which teach Hindī and Urdū until quite recently demanded from the pupils the knowledge of *both* scripts as well as ability to transcribe from the one to the other.

[2] A similar sentiment is to be seen in those ultra-nationalist Iranians who seriously advocate the introduction of the ancient Avestic script for modern Irān. The recent adoption of phonetic script by Turkey may be cited, but in this case the anti-orthodox tendencies of the rulers were helped by the intense nationalistic feelings of the whole people.

[3] See Appendix B.

The political situation seems to engross all our energies to-day. It is, however, but a passing phase in our history. The destiny of India is far higher than the attainment of mere political *svarāj*. India is the heir to the immemorial Aryan culture—a culture that has stood the test of many more centuries than the culture of the West. India has a Message to give for which the West has been groping.[1] It is the Message of true *svarāj* (Conquest of the Self), and the world will consent to receive it only from a free India and in the English language. Hence all the welter and confusion to-day.

To sum up:

The linguistic problem of India has a threefold aspect:

(*i*) provincial,
(*ii*) national, and
(*iii*) international.

As regards the first; every important Vernacular is experiencing a new life, a renaissance. So it seems that they will be cultivated much more extensively in the near future. The way of least resistance in these circumstances is to divide the country (at any rate for the purposes of education) into regions controlled by "linguistic universities". This would assuredly bring out the finest in each vernacular. Each vernacular is as it were a gem, which is required to be cut and polished in a particular way to bring out its intrinsic beauty. Then by joining all these we shall get a necklace of exquisite gems worthy of our motherland, Hind.

Besides the mother-tongue we shall need an inter-provincial language to serve as a common language for the masses. Let that be Hindōstāni; neither Urdū nor Hindī, but a harmonious blend of them both typifying in itself the two great cultures of our peoples reunited as *one* nation. Here, as we have also seen, English is a close rival, especially in all the higher fields of human activities.

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[1] Rabindranath's winning the Noble Prize was proof enough of the yearning of the West for the Message of India.

There is a great future for Hindōstānī, and as India gains a higher and higher position as a nation, English will probably come to occupy a position next to the mother-tongue itself even within our national life.

Lastly, as a member of the World Commonwealth of Nations and as a great member of the United Nations, India needs English. Perhaps this very fact will give to English a position within the land as an important interprovincial language. And above all in order that the ancient Aryan Message shall be proclaimed to the world, and that thus India may fulfil her destiny, she should make the English language—the world-language of the future—her own.

APPENDIX B

English as World-Language[1]

Language is admittedly one of the fundamental factors of unity in human society and repeatedly in the history of the world the language-bond has proved stronger than bonds of race and blood-relationship. The limits of nations in the past have been mainly linguistic. The *barbároi* of the Greeks were those who did not understand and could not talk the language of the Hellenes, and the *mlecchas* were those who were unmoved by the sacred chants of the Vedas. This strength of the linguistic bond is quite clearly understandable if we only remember the fundamental aspect of language. Language is a *human institution* and each language embodies the achievements and reflects the aspirations of a particular section of the human race. Each language has grown spontaneously, as it were, with the growth of the people who speak it, and hence the speakers of it have an irresistible "fellow feeling" towards one another.

The idea of human brotherhood is as ancient as the human race itself and with this idea has always gone the idea of a world-language. Leaving out of account ancient history, there have been no less than 71 attempts at universal language made since 1629 A.D. in Europe alone.[2] The first of these was by Descartes who in that year forecasted "a regular universal grammar; words to be formed with fixed roots and affixes and to be in every case decipherable from the dictionary alone."

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[1] The substance of this was contained in a memorandum communicated by me to the Northern Peace Conference Union, Stockholm, Sweden.

[2] *International Language* by W.J. Clarke, 1907. The information in the following paragraphs has been mainly derived from this book.

All such universal languages can be divided into three main types; *a priori*, *a posteriori* and *mixed*. The first type creates arbitrary rules of grammar and an arbitrary symbology for words. Ideas are divided into categories and each category is represented by a letter of the alphabet and so on with further sub-divisions. The system is much like the classification system of Dewey used in libraries with this difference that letters are used instead of figures. The second type takes the existing "natural" languages and seeks to combine the common features of all by invariable and more or less arbitrary rules of grammar. In this type the words are more or less recognisable, though the sentence construction often jars on a sensitive ear. The *mixed* type is a mixture of these two types.

The first type is obviously, in its very nature, cumbrous and impracticable. It may delight a mind which always seeks order and regularity and which thinks in categories. But for use in everyday life such attempts are not of much use. In the *mixed* type, too, the *a priori* element is a serious hindrance. In fact the utter unfamiliarity of the words as compared with the familiar forms of natural speech constitutes a serious objection.

The *a posteriori* languages present no such difficulty, for they are based entirely on the known natural languages. They can be simplified and regularised to a high degree of perfection. The most notable of such types in recent years has been Esperanto invented by the late Dr. L. Zamenhof of Warsaw. Himself a trained linguist, able to read, write and speak all the important languages of Europe;

he devoted his whole life to this philanthropic ideal of a universal language. He carefully analysed all grammars and laid down sixteen fundamental rules as an irreducible minimum. He similarly analysed the vocabularies of the various languages and arrived at a certain number of *roots* from which by adding various affixes of fixed value the whole complicated structure of a language could be built up. He naturally took as his basis the Indo-European languages, for they belong to politically the most important part of humanity. But he did not confine himself to the Indo-European family alone. He took the broad principle of *agglutination* as a fundamental one in his language, thus rendering Esperanto a flexible language of immense power and an almost unlimited range of expression. The root vocabulary which he first published is a deeply and carefully thought-out piece of linguistic analysis. He has tried to take the roots with reference to the number of speakers of the natural languages to whom they are familiar. Thus well-nigh 60 per cent. of his roots are Latin in origin and nearly three quarters of the rest are Germanic. But he has given thought to "representation of minorities" as well, and the Slavic and other groups of the Indo-European languages have also contributed to a limited extent. In any case, viewed from even a strictly linguistic viewpoint, Esperanto is a most remarkable invention and the work of a giant mind and of a deeply loving heart.

The essential advantages claimed for Esperanto are its simplicity, its flexibility and its regularity. The sixteen rules of grammar can be mastered by a man of average intelligence in about one hour's time. The vocabulary should not present great difficulty to any person familiar with one of the modern European languages, and for an educated person, who knows more languages than one, there should be no difficulty whatever. In short, one can read it fluently in about a week and to speak with ease may require as much longer.

Of all the *a posteriori* languages, so far launched into existence, Esperanto was the best adapted to be the World Language. But it had one *fundamental* defect; for a language to be adopted by any large number of human beings and to be used by them for any length of time must be *living* and *growing* It is exactly for this reason that no *dead* language can become the world-language. Now though Esperanto is not a "dead" language by any means, yet it possesses within it the "seed of death". Zamenhof had before him the example of Volapük which was very much to the front in the days before Esperanto was first given out to the world. That language (Volapük) was wrecked by having too many changes being suggested in its structure; and there was no central authority to control and make note of these suggestions. Zamenhof therefore formed an International Central Committee to deal with all matters of change in Esperanto. He very wisely kept himself strictly aloof from any interference with this body. He gave them fullest permission to add to the vocabulary and even to adopt new affixes as need arose and supplementary vocabularies have been issued more than once. *But he definitely forbade any change in the sixteen fundamental rules.* Of course he saw the difficulties which would arise if these fundamentals were changed and he did not want to repeat the disaster that had overwhelmed Volapük. But this very prohibition was the "seed of death" for Esperanto. It, as it were, made the skeleton of the language rigid and fossilised; and if the skeleton does not grow and develop with the needs of the body, death must inevitably ensue.

In fact the history of Esperanto so far has already definitely shown this weak spot. An accusative case suffix was used in Esperanto to denote the direct object of a verb and also the "goal" of a verb of motion. Undoubtedly both these are essentially usages sanctioned by Indo-European grammar, but the latter type of the accusative is being gradually discarded in English and French, two of the most important languages of the present times. This part was, therefore, felt to be a difficulty by most English Esperantists and some of them suggested its removal. Naturally Zamenhof would not allow it. Had he done it Esperanto would have split up long ere this. But the fact that he did not allow the change did not prevent a split, and some of the aggrieved Esperantists started a new language, Ido, which was Esperanto with a few changes. Zamenhof prevented the dissolution of his language just at that time, but in that very prevention was demonstrated the existence of this fatal defect in his scheme. It does not detract a whit from his great work that he did not see this defect because *this defect must invariably exist in all artificial languages.* Zamenhof had so far succeeded in reducing the complications of grammar and had so carefully chosen his phonetic elements that one thought that he had reached the bed-rock of grammar. But there is no such thing as a firm bed-rock of linguistic essentials. *Language is a human institution and with the human race it must grow and change.* Hence all artificial languages must be foredoomed to failure. Had Zamenhof not included the "accusative of motion" in his scheme, even then some other difficulty might have arisen (the other accusative, for example) and a split must have resulted sooner or later. When in a living growing organism there is rigidity *anywhere*, disintegration is the inevitable result. And rigidity in *some* features at least, must be at the root of all artificial languages.

Thus we are inevitably thrown upon the *natural living* languages of the world in our search for a world-language. These languages are not "rigid" in any sense of the term because these have changed both in structure and vocabulary with the changing ages. They have grown with the people and have faithfully embodied and reflected their hopes and ideals. Their want of rigidity is evident even on a cursory acquaintance with their history.[1]

The next question that would arise is, which of the present living languages is the best suited for this unique honour. In determining this question four main points have to be considered: (1) simplicity of structure, (2) wide extent, (3) commercial importance and (4) political strength. It is not at all necessary to labour these four points because they are self-evident to every one. Of course no *one* language known at present combines within itself *all* the four points together, so we have to take, as it were, a balance of all these qualities. Under the circumstances and conditions of modern world-politics the last two are the most important. The second qualification is necessarily implied in the third. The first qualification is also necessary but not absolutely so. Thus Persian is perhaps the simplest of languages in grammar and structure, but it cannot assuredly take the position of a world-language.

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[1] We should also note that whenever any "natural" language has become rigid for any reason it has ceased to be "living". Sanskrit is a typical case of a once living language becoming "rigid" in grammar and then becoming "dead". The living languages of the people of India have grown and have prospered because no fetters were introduced for them in the shape of grammars endowed with an almost religious authority.

Taking, therefore, the question as a whole we must come to the conclusion that English is the only language that comes nearest to fulfilling the four requirements. It is supreme as regards numbers and extent. Its importance commercially is also unchallenged. Perhaps Spanish, commanding the vast Central and South American markets, is its nearest rival in that respect, but even that is a good way behind. And the political strength of English-speaking races is beyond any doubt now. In fact the world-language *must* be the language of the races that lead the world politically.[1] The nations that wield this power are the British in the old world and the Americans in the new—and *both* speak English.

While English thus fulfils the last three requirements it also possesses the first recommendation of simplicity. Of all the languages of Europe it is undoubtedly the simplest in structure. The only really serious rival of English for the position of a world-language was, till recently, French. This was due to the domination of France in European politics from the days of Charlemagne onwards. But as already remarked, it is commerce, united to political power, that is the real deciding factor at the present time. And in respect of commerce, French takes the fourth place in the world, Spanish and German being considerably higher on the list. And the question of the political and diplomatic importance of English was decided when the Treaty of Washington closing the Russo-Japanese War was drafted *both* in English and in French. This and the Treaty of Versailles closing World War I, have admitted English speech as at least the equal of French in diplomacy and politics as well.

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[1] This was the chief reason for the acceptance of Latin in Europe during so many centuries. The Christian Church doubtless was also a factor in the spread of Latin, and the Church also was a political power of the first magnitude in those ages.

English has another great advantage. Owing to the world-wide connections of England and owing to the varied foreign nations that have come to England during her long history the vocabulary of English has been enriched by foreign elements to a far greater extent than that of any other European language. This in itself constitutes a claim to being adopted for international purposes. English is a Germanic tongue with a preponderatingly Latin vocabulary.[1] Thus we see that even as regards structure and vocabulary English is eminently fitted to be the world-language. The force of circumstances has put England at the head of world-politics and the same circumstances have shaped the English tongue and have given to it a form which is already international in its simple structure and rich treasure of loan-words. And the pressing needs of rapid international communication will mould the language towards still greater simplicity and will import foreign words in larger numbers yet,[2] till it will become one day the truly international world-language. No mere committee or a body composed of scholars, however eminent, can give to English the position which the force of circumstances—call it Divine Providence if you will—is *giving* it. Languages are not moulded by committees or by scholars. The forces which mould nations can alone mould languages.

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[1] This phenomenon is paralleled also in Urdû in India, admittedly a language which grew under the political conditions of the land in the 16th century, in order that the various people of India might understand each other and also their foreign rulers from Persian-speaking lands.

[2] Consider, for example, the "war-words."

If there is anything clear amidst the present outward chaos in our world, it is the conviction held by all the best minds that the heart of our old world is now yearning for international and universal brotherhood. That is to be the key-note of the future, that is the appointed destiny of the world. The feeling is there and as soon as the immense number of maladjustments made at the close of World War II have been remedied, the forces of unity shall gather strength and shall carry all before them. And this same spirit of unity—the *Zeitgeist* of our twentieth century—shall also help to mould the English speech to take its appointed place as the international world-language.

For us in India the position is somewhat anomalous. But our history has furnished in miniature the same problem of a common language. We have had our language difficulties in the past. In the ancient days of Hindu supremacy—the days of theocracy—we had the sacred Sanskrit as our common tongue. In Europe, Latin occupied the same position once and for the same reasons. Later came the invasion of Islam and the establishment of Moslem rulers in India. As long as Islamic power was more or less confined to local and provincial centres, its influence on the languages was not clearly marked. But under Akbar, when Islamic rule in India approached its zenith, we note the rare phenomenon of a common language growing up into life.[1] The Persian-speaking Emperors united the larger part of India under their sway and these political conditions grafted the rich Islamic vocabulary of Iran on to the vernaculars of India. Round Imperial Delhi and its neighbourhood a new language was born of Indo-Iranian parentage. This language was Urdū, which, as the name implies, was the *language of the camp* and it has served ever since as the common speech for inter-provincial intercourse all over India. It may also be pointed out that the political supremacy of Islam in Asia gave to Persian the position of the diplomatic language of Asia just like that of French in Europe. The Indian nation, struggling to become a real united people, is deeply concerned with the question of a common language, a national language, as it were, for India. That question has been already practically settled by the forces which have unified the Indian peoples. When the English came to India they found Urdū already in possession of the field as the common tongue and they accepted it as such. The antagonism, artificially fostered for personal or political reasons between Hindī and Urdū, is bound to die out as the people unite closer together. The common language of India is to be neither the Sanskritised Hindī of the Pandits of Kāśī, nor the Arabicised Urdū of the Moulavis of Lucknow, but it will be a language having a vocabulary borrowed from both Sanskrit and Arabic; and just because united India shall embody the Hindu-Islamic culture, its language also shall symbolise this Hindu-Moslem unity. The people shall be moulded into a united Indian nation and their common tongue shall be the Hindōstānī language —a tongue enriched with gifts from all our Indian languages. Here also we see the problem being solved by the force of the *Zeitgeist* the spirit of the age, which calls so loudly to the peoples for unity and co-operation.

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[1] The actual beginnings of Urdū are about a century earlier.

Such is our miniature language problem in India. It was not for nothing that Providence guided England to our shores and made her the supreme power in our land. With the English-speaking races we shall have to work out our destiny and hence in the days to come, we too shall have to learn English. Not only for "international" but even for our national purposes English will have to be used in a larger and larger measure. Hindōstānī will, of course, be useful for the masses but for all important aspects of international contacts English will have to be used. We have already made English our own language to all intents. With our growing "national" patriotism we will, of course, learn our own languages first, but we must have English as compulsory second language like the rest of the educated classes all the world over.

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